



MANYAM

A NEWSLETTER ON THE EASTERN GHATS



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FROM PRICKLY PREDATORS TO PALMYRA FRONDS

In this issue, we present to you three articles illustrating the lesser known faunal diversity of the Eastern Ghats, some of the livelihood options utilized by the local indigenous communities, and the organizations involved in documenting the natural wealth of the landscape.

Brawin Kumar, an ecologist specializing on small mammals in the southern Eastern Ghats of Tamil Nadu, talks about his experiences carrying out surveys on the Madras or South Indian Hedgehog, an insectivorous mammal endemic to southern India, which is known to occur only isolated pockets in the southern Eastern and Western Ghats across Tamil Nadu, Andhra Pradesh, Kerala and Karnataka.

Syed Subhani, Secretary of ASHA, an NGO working on communities, livelihoods and forest management in Chintur, Andhra Pradesh talks about initiatives for training

and capacity building tribal communities for harvesting bamboo and Palmyra fronds used to make fiber products, for income generation activities, in and around the forests of Papikonda National Park in the Eastern Ghats of Andhra Pradesh.

Lastly, Jyothi Reddy, Program Officer at the Environment Protection Training and Research Institute, which hosts the Environmental Information Center on the Eastern Ghats, talks about the activities undertaken by the Center on documenting the diversity of the Eastern Ghats, disseminating information on the region and the various environmental awareness activities undertaken carried out throughout the Eastern Ghats.

We hope these articles will help you understand this landscape better and introduce you to some of its interesting aspects.

-Vikram Aditya



Tribal communities harvesting bamboo sheaths and Palmyra fronds for village based income generation activities around Papikonda National Park (Photos: Syed Subhani)

SOUTH INDIAN HEDGEHOG IN DANGER | BRAWIN KUMAR

Hedgehogs are small, nocturnal mammals with spines that look like a smaller version of a porcupine with smaller spines and an extended nose. But in reality, they are distant cousins of the common shrew. Their spines extend from their head to their back and sides. Hedgehogs live in burrows, and have a brown to black colored coat that helps them camouflage with their surroundings. There are three species of hedgehogs in India (Indian long-eared hedgehog, Indian hedgehog and the Madras hedgehog). The spines of the Madras hedgehog are hard, sharp and have a white tip. White fur outlines the spines all around and the fur on its chest is also white. However, its belly on the ventral side has no fur and is covered with bare skin, thus giving its zoological name 'nudi' (naked) and 'ventris' (ventral side) or *Paraechinus nudiventris* of the hedgehog family Erinaceidae. Hedgehogs don't have a long tail like rats and mice. Their tail is tiny and imperceptible. Their incisors are not like the incisors of rats and mice. Whenever the animal feels threatened or startled, it pulls its head and legs towards the belly and curls into a ball exposing only the spines to protect itself.

The Madras Hedgehog or Bare Bellied Hedgehog, known in Tamil as Mulleli (Mull = spines; Eli = Mouse), is found only in India and is endemic to the southern states of Kerala, Andhra Pradesh and Tamil Nadu. It occurs mainly in the southern Eastern Ghats of Andhra Pradesh and Tamil Nadu and in two isolated pockets in the Western Ghats of Tamil Nadu and Kerala. They are mostly reported from dry lands, semi-arid zones, small hillocks, deserts, scrub jungles, gardens, farmlands and villages adjacent to forests. The Madras hedgehog is very poorly studied, among the three hedgehog species in India. Old literature (1832-1972) revealed that its range in Tamil Nadu is known from the Varasanaadu valley, Tirunelveli, Kanyakumari, Salem, Erode, Avinashy, Srivilliputhur, Nilgiris, Madras, Gulf of Mannar, Trichy, Coimbatore, Pondicherry, Tiruppur and Perunthurai. Very little is known about the behavior of the Madras hedgehog. They are known to have the ability to survive snakebites and to self-anoint.

I formulated a questionnaire survey to systematically document the perceptions of people who interact with the hedgehog on a regular basis across its range in Tamil Nadu. Telephonic interviews and surveys revealed that there were large populations of hedgehogs in the past in Tirunelveli, Tuticorin and Kanyakumari districts of southern Tamil Nadu, but they are a rare sight today. I travelled to some of these sites and

spoke to village elders. According to them, the Madras hedgehogs had a wider distribution in the past, but are very rare now. Local communities in these districts also mentioned that while walking on fine sand they saw a line made by the tiny tail and the dainty pug marks/tracks made by the Hedgehogs clearly visible in the sand. There were also some records of hedgehogs having fought with snakes and mongoose. My surveys also informed me that the hedgehog hunters are opportunistic and do not always actively seek out and persecute the animals.

I found that the Mulleli was a victim of superstitions. Among the many superstitions surrounding it, communities also believe that having the skin of hedgehogs in their houses is a good omen, and is considered a status symbol. In Nagercoil, I found hedgehog spines dried and used as medicine for whooping cough. I even found a bottle of mulleli thailam (hedgehog oil) that was being sold at an ayurvedic medical shop.

There are different ways used by communities to catch hedgehogs in Tamil Nadu. One of them is using hunting dogs to smell out their burrows. In the Maruthuvalmalai hills in the southernmost tip of Western Ghats, people described hunting practices such throwing soil or stones on the hedgehog to make the animal curl up, and they can pick it up for consumption. My search took me to Papanasam where the local people are a treasure trove of traditional knowledge. And here the hedgehog has another name - 'Irumaleli' (Irumal - cough, eli - mouse) referring to it being regarded as a traditional medicine for whooping cough. As I concluded my hedgehog surveys around the Eastern and Western Ghats of southern Tamil Nadu, I was faced with mixed emotions. The Madras hedgehog faced a tenuous future in its historic homelands.

- Brawin Kumar is an ecologist working on small mammals of South India, based at the Institute of Zoology, Chinese Academy of Sciences, Beijing, China. His work currently focuses on the ecology and conservation of rock rats and hedgehogs.



HEDGEHOG PHOTO: BRAWIN KUMAR

"I found that the Mulleli was a victim of superstitions... communities also believe that having the skin of hedgehogs in their houses is a good omen"

INCOME FROM BAMBOO AND PALMYRA: A SUCCESS STORY | SYED SUBHANI

The tribal 'Agency' area spread across the Eastern Ghats in Andhra Pradesh's East Godavari district has rich untapped natural resources. Every village here has at least 3000-4000 Palmyra trees. However, people here do not know how to separate the fiber from Palmyra fronds, and this rich resource is therefore going untapped. Likewise, Bamboo sheaths and leaves available in this region could be used for income generation by tribal communities. However, tribal communities in the Eastern Ghats, particularly women are unable to utilize these resources for generating income as they are unaware of the appropriate technologies for processing and tapping of Palmyra and Bamboo resources from the forests.



Carrying Palmyra fronds for processing

Palmyra Palm (*Borassus flabellifer*), the Asian Palmyra palm, Toddy palm, Sugar palm, or Comb-dian palm, is native to Southeast Asia. The Palmyra palm in India is estimated about 120 million, mostly spread across south and central India. Palmyra palm has been a part of life of tribal people since ancient times. It is reported by Dakshin Gujarat Neera Tadgud Gramodhyog Sangh that there is variation of 500 to 1500 Kernels per tree and 7 liters to 20 liters of Neera per tree per day in different trees which shows that with proper scientific management higher yield can be obtained. It was observed that economic value from each palm per year is around Rs.5,000/- to Rs.10,000/- without any inputs.

The Government of India has enacted the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006. Under this act, Scheduled Tribes and other Traditional Forest Dwellers have been given rights to inhabit forest lands and/or practice cultivation or any other traditional activity for generating livelihood. Therefore the untapped rich natural resources of the Eastern Ghats can potentially be collected and processed by adopting appropriate technologies for value addition, by which tribal women can get good market for their produce and help raise the living standards of their community in the Agency area.

Any effort in the area of processing facilities of these untapped resources, calls for application appropriate technology and creation of infrastructure facilities that would enable them to take up processing for value addition of Untapped Natural Resources [UNR] and earn more income. *Association for Social and Humanize Action* [ASHA] has been working in these villages for the past 15 years towards understanding the existing challenges with regard to tapping natural resources for livelihood support. ASHA has been involved in designing and implementing projects on using appropriate

technologies for sustainable management of NTFP and utilizing natural resources for livelihood generation, particularly the landless tribals. Earlier preliminary surveys and participatory research carried out by ASHA in these villages has revealed that people are not sensitized



Selection and cutting of bamboo sheaths

about sustainable management and processing of forest produce. ASHA has undertaken participatory planning with women in some selected tribal villages towards using appropriate technologies and creation of infrastructure facilities for income generation activities. Thereafter, ASHA initiated a project in partnership with *Department of Science and Technology, Government of India* for generating awareness and providing training of the appropriate technologies, assisting in market linkage, etc. to the Scheduled Tribes forest dwellers in the northern Eastern Ghats region for utilization of forest resources like bamboo and Palmyra fronds.



Binding of bamboo sheaths for storing

Bamboo is a product suitable for income generation activities. The bamboo dominated forest areas are demarcated in 3 series of coupes, each series consisting of an area of 3,000 to 5000 hectares. Each series is worked in serial, following the regeneration growth of 3 years cycle. Estimated regeneration after 3 years of working area is 160 to 200 Bamboos per hectare. The Forest Department operates a total of 20,000 to 30,000 hectares area in a year in the Chintur Forest Division and therefore the estimated total regeneration is 36.00 lakh bamboos.

Thus a total of 5.40 crore sheaths can be collected from the 36 lakh bamboo in the Chintur Division per year. Hence, there is ample scope of creating employment to forest dwelling communities, provided machinery, training and marketing linkage with temples and corporate sector. ASHA is helping local communities in partnership with the *Keystone Foundation* under *People and Nature Fund* to take up collection of natural resources and help them improve their earnings and quality of life in the long run. ASHA hopes to receive support from *Department of Science and Technology* for extension of this project in large areas of the division.

-Syed Subhani is Founder and Director of ASHA, based in Chintur, East Godavari district, Andhra Pradesh

EPTRI: THE ENVIS CENTER ON THE EASTERN GHATS

| DR. M. SUNEELA, ENVIS COORDINATOR AND DR. K. JYOTHI, PROGRAM OFFICER

The Environmental Protection Training and Research Institute, located in Hyderabad hosts the Environmental Information System (ENVIS) center on the Eastern Ghats, set up by the Ministry of Environment Forests and Climate Change (MoEFCC), Government of India. ENVIS is a decentralized information network of distributed subject oriented centers ensuring integration of national efforts in environmental information collection, collation, storage, retrieval and dissemination. The ENVIS Centre on Eastern Ghats was set up at EPTRI in 1994 with the theme "Status on Ecology of Eastern Ghats" covering the entire Eastern Ghats extending from Odisha through Andhra Pradesh to Tamil Nadu and a small part of Karnataka. The Centre publishes two Newsletters: "The Eastern Ghats" in English and "Toorpu Kanumalu" in Telugu that are disseminated to a wide spectrum of stakeholders. The objective of this ENVIS center is to systematically collect, compile and disseminate information on issues relating to the Eastern Ghats for industries, researchers, policy makers, academicians, environmentalists, universities, Pollution Control Boards, NGOs, etc.

The activities of the Center include development of information databases and strengthening of information resources in the field of Eastern Ghats; Publication of review articles covering various aspects of Eastern Ghats; Documenting national legislations; Documenting information on distribution and conservation of biological diversity with special reference to Eastern Ghats; Monthly compilation of news items on the Eastern Ghats; Establishing linkages with information users, carriers and providers from among government, academia, business and NGOs including that with ENVIS; Documenting information in the form of abstracts, research publications and other material on biodiversity of the Eastern Ghats; Collecting reports, publica-

tions and journals on Eastern Ghats for developing databases.

The Centre is a storehouse of information on the Eastern Ghats. The centre also conducts Environmental Awareness Programs to School Children and colleges under

Jawahar Bal Swachh Bharat Campaign, presents papers at National Conferences and also conducts training programs. The centre also brings out stickers, postures, brochures, pamphlets on environmental issues, also conducts programs to school children on important environmental days. The centre has initiated Memorandum of Understandings with Universities/Institutions to exchange material related to research facilities, exploration of flora, identification of medicinal plants and to enhance research skills. EPTRI-ENVIS is also preparing Peoples Biodiversity Registers (PBRs) for Peddupalali village of Kadapa district in the southern Eastern Ghats and Chirrayanam village of East Godavari district, both in Andhra Pradesh. These PBRs shall contain comprehensive information on availability and knowledge of local biological resources, their medicinal and other uses or other traditional knowledge associated with them, and with socio-economic, socio-cultural resources, health, nutrition, etc.

- The EPTRI-ENVIS website and the newsletters on Eastern Ghats can be accessed at www.eptrienvis.nic.in



Painting competition at Jawahar Bal Bhavan conducted by EPTRI - ENVIS centers on the eve of World Environment Day, 2016

PHOTOS : JYOTHI REDDU, EPTRI

For feedback & suggestions please contact: vikram.aditya@atree.org, ovee.thorat@atree.org, rajkamal@atree.org



Editorial Team

Editor: Vikram Aditya

Associate Editors: Ovee Thorat, Rajkamal Goswami

Editorial Review: T Ganesh, Prashanth M B

Ashoka Trust for Research in Ecology and the Environment

Main Office

Royal Enclave, Srirampura, Jakkur Post,
Bangalore - 560064, Karnataka

Tel. no. : +91-(80)-2363-5555 (EPABX)

Fax : +91-80-23530070



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