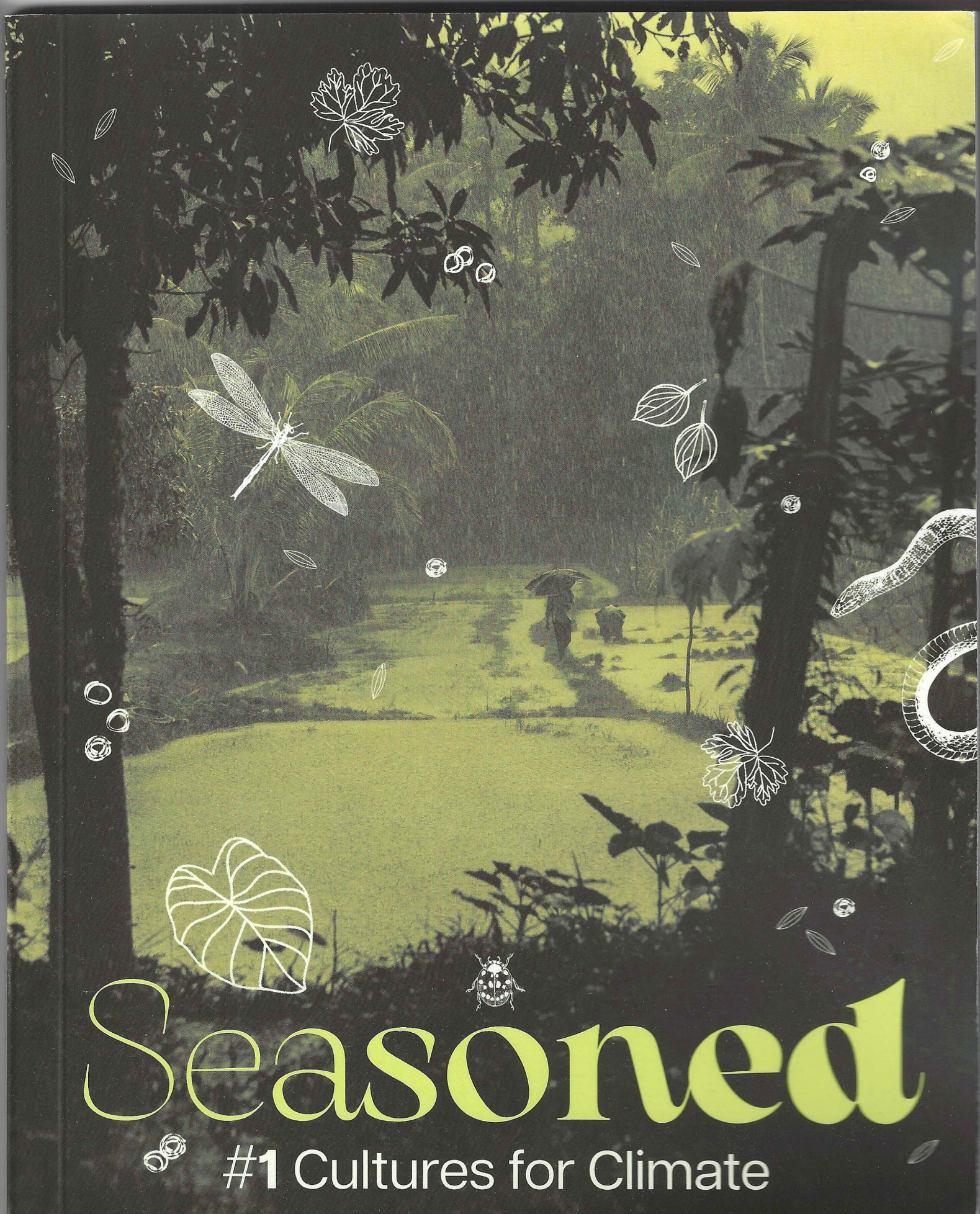
Seasoned
#1 Cultures for Climate

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Forests, Food, and Future:

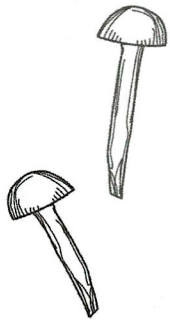
The Endangered Link Between India's Communities and Wild Nutrition



Words by **Sharmila Vaidyanathan** *Images by* **Rachit Kirteeman**

Just before the onset of monsoon, when the forests of Mayurbhanj district in Odisha are blanketed in dense humidity, tiny flower-like mushrooms dot the forest floor. With tender white stalks, the Bali Chatu, as these mushrooms are called in the regional language, are foraged by the indigenous communities here and sold in the local markets.

"They say when lightning strikes, you will find these mushrooms," explains Chef Rachit Kirteeman before adding, "But that's just a notion because, during this time, you do see more lightning in the area." Kirteeman has also documented other edible mushrooms from Mayurbhanj's wilderness that are vital food sources and provide subsistence for the indigenous communities. The Bihida Chatu mushroom grows mainly on termite hills, while the Kukuda Chatu is exclusively found in the decaying leaves of the Sal trees, he explains.



It's no secret that the forests host a treasure trove of floral and faunal species and one can spend a lifetime trying to unearth this cornucopia. However, when we discuss food and nutritional insecurity, the emphasis is often on increasing agricultural productivity and biodiversity while ignoring the role that forests play in this equation.

In 2017, the High Level Panel of Experts on Food Security and Nutrition (HLPE) released an exhaustive report highlighting the multiple significant contributions of forests in providing food security and nutrition. The **'Sustainable forestry for food security and nutrition'**[1] report explained that forests manifest their impact through channels like direct supply of food, direct supply of energy (through woodfuel), sources of employment and income generation, ecosystem services that include water regulation, soil protection, pollination etc., contributing to human health and well-being, and providing a safety net during lean seasons and periods of scarcity.



About **22% of India's geographical area**[2] is covered by forests, and about **22% of the country's population**[3] resides in villages referred to as forest-fringe villages or FFVs due to their proximity to the ecosystem. Forests play a vital role in the survival and livelihood of

these communities. We are also having this conversation when the biodiversity of our planet is under threat, and wild foods are often ignored in this context. **The State of the World's Biodiversity for Food and Agriculture report**[4] by the Food and Agriculture Organisation of the United Nations states that about 0.6% of the global dietary energy supply comes from forest foods. Yet, they remain largely undocumented making it challenging to understand their contributions and the threats they face.

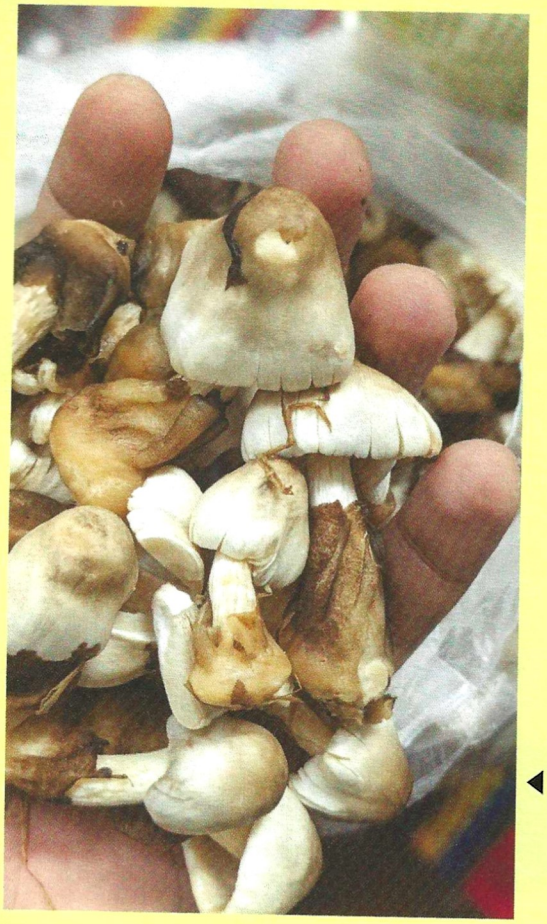


◀ *Bali Chatu Mushroom*

More than food for thought

In the Mawai region in Mandla, Madhya Pradesh, a female member of the Baiga community is seen carefully separating the bright red flowers from the equally thick red stems as she shares the process with the **Humans of Gondwana**[5] team–a photo project that captures the everyday lives of India's indigenous communities. She informs the team that these flowers belong to the Khatta Bhaji plant (sour edible leaves) and the dried flowers are also used to make chutneys, among other delicacies.

Flowers, fruits, green leafy vegetables, edible insects, tubers and more: forests provide a wide variety of foods rich in nutrition and have strong cultural implications for the surrounding populations. Additionally, forests provide access to non-timber forest products (NTFPs) like medicinal plants, resins, aromatic oils, fibers etc. Estimates reveal that India's indigenous communities collect **NTFPs worth Rs 200,000 crores**[6] annually.



Pala Chatu Mushroom

The interplays between forests and the communities that depend on them are far more nuanced and go beyond the transactional nature often documented, explains Dr Jennifer Zavaleta Cheek, Assistant Professor at South Dakota State University. Between 2016-17, Dr Zavaleta Cheek and her team interviewed the residents of 40 forest-adjacent villages in Palau, Jharkhand and Bankura, West Bengal, gathering monthly data on their food sources using a 24-hour diet recall. Her research revealed that forests provide food security, especially during the lean months of June and July when food provisions are dwindling, and the new set of crops are not ready for harvest.

[5]

[6]

"We found that those who did use the forests had higher dietary diversity than those who didn't. This is particularly important because dietary diversity is very low across the range of the study. Even incremental changes are important," explains Dr Zavaleta Cheek. A significant observation from the study was that these forest visits benefitted the women by providing access to dark green-leafy vegetables, increasing their level of nutrition and addressing a gap in their diets.

Dr Zavaleta Cheek's study highlights that beyond what is foraged, it is important to look at who gains from these products and when they are significant. Harisha RP, Post-doctoral Fellow at the Ashoka Trust for Research in Ecology and the Environment (ATREE), explains that these wild foods form a vital part of the community's identity. His research focuses on the Soliga community in Chamarajanagar district of Karnataka. The Soliga is India's first indigenous community living in the core area of a tiger reserve to get their forest rights recognised. He shares that about 30-40% of their diets come from wild foods from nearby forests.

"The community members get some provisions through the Public Distribution System (PDS). They also get a special nutrition supplementary kit for six months from the Government of Karnataka. But they are still deeply connected to the forest and have an innate knowledge of what to eat and how to treat these foods for optimal nutrition and health," explains Harisha.

Chef Kirteeman shares a similar observation about the indigenous communities in Koraput, Odisha. "The villagers grow turmeric together here. Their day starts early with something like a ragi porridge, after which they make their way to the fields. Once they are done with their work, on the way back, they forage for tubers and other greens from the forests, which they use for cooking their evening meal," he says.

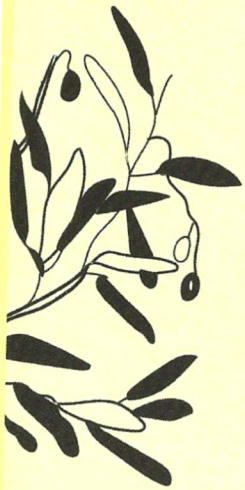
But both Harisha and Kirteeman warn that these idyllic scenarios are fast changing. During his research, Harisha surveyed the younger members of the community using images of wild foods from the forests. "The disconnect is unmistakable. Compared to the older generation, the younger members could not recognise half of these products."

Whose land is it?

A recent report by Global Forest Watch, an online platform sharing real-time information on forests globally, raised alarm bells about India's shrinking green spaces. According to the report, between **2001 and 2023**[7], India has lost about 2.33 million hectares of tree cover, 18% of which belongs to humid primary forests.

These findings come at a time when the forests of the country are further threatened. Recently, India's Forest (Conservation) Amendment Act 2023 came under heavy criticism from activists and environmentalists as it narrowed the definition of the term forest, thereby paving the way for developmental activities in forested areas. An **interim order by the Supreme Court**[8] reinstated a verdict from 1996 wherein the court ruled that the dictionary definition of the term forest must be considered for legislation on conservation. This meant that even those patches of forests that are not formally recorded in government records come under the purview of conservation.

While this is an oversimplified explanation of a complex problem, the legislation reveals a lack of consideration of forest-dependent communities when it comes to framing policies. Zoom out, and a similar narrative emerges in the larger picture. "Forest conservation often focuses on biodiversity or carbon storage for climate mitigation. However, the interactions between people and these ecosystems are complex, especially in India, where people live in mosaics. There are forests and trees outside of forests, both of which play a role in these conversations," explains Dr Zavaleta Cheek.



She adds that a nuanced approach to forest access is essential in framing pragmatic conservation measures so communities are protected during periods of food insecurity. Her work in Bankura and Palau also revealed that living next to high tree cover provided a buffer for the households during weather shocks, like heavy rains, to combat food insecurity.

In India, the Forest Rights Act of 2006 was enacted in 2008, recognising the historical rights of the forest-dependent communities and the scheduled tribes over forest resources. However, the implementation of this act has been patchy, adding to the woes of these communities,



explains Dr Ajay Kumar, Assistant Professor of Plant Science at Central University of Kerala. Dr Kumar has been documenting the importance of wild foods in building agricultural resilience and states that there is a symbiotic relationship between the communities and forests, where they access resources mindfully, keeping their conservation in mind.

His observations about the Forest Rights Act have been mirrored by a **2024 report**[8] published by the Delhi-based NGO Call For Justice, which highlights considerable lapses in the Act's implementation. Some of the issues highlighted include delays in addressing appeals, lack of community representation in committees steering the Act and prioritisation of other projects over community rights.

Additionally, Dr Kumar also shares that the relocation of forest-dependent communities breaks the intricate bond they share with their surroundings, forcing them to change their way of life. According to a **thematic map**[10] published by the Global Atlas of Environmental Justice and non-profit organisation Kalpavriksh, 13,445 families were displaced between 1999 and 2019, mainly from tiger reserves in the country.

From a research perspective, documenting wild foods and understanding their role in food security is paramount, explains Dr Kumar. "The forest-dependent communities have evolved specific techniques to treat these wild foods and make them suitable for human consumption. There is also a plethora of information on medicinal plants. There is so much to learn and document here. Unfortunately, most of the research is focused on crops like paddy, tomato, chickpea, etc. We need more funding to focus on wild foods," he adds.

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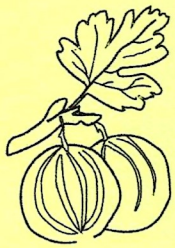
A changed world

When Sannarangegowda talks about accompanying his parents into the forests, the element of nostalgia is palpable. A member of the Soliga community in the BR Hills, Karnataka, he spent his childhood amidst the wilderness learning about all the wild foods that surrounded him.



The forests provide a range of products like tubers, flowers, lichens, gooseberry, jamun and honey for the community, but nature's bounty is no longer what it used to be, he says. Along with his community member Kethegowda, he explains that many plants that grew in abundance are now becoming hard to find. Eechala Hannu, a date-like fruit is one example the duo share, which is slowly fading from existence. "We used to get so much of this fruit, now we rarely see it around. About 20 years ago, we would get 10-20 loads of gooseberries. Now we get just one load that too with great difficulty," they share.



The community is keenly aware of the changing weather patterns. Rains are no longer predictable, and intense rains over a short period drastically impact the forest ecosystem. "The jamun trees are finally flowering after almost three years," says Sannarangegowda.

Health workers from the region are now reporting an increase in diseases such as hypertension and diabetes, which were previously unheard of in the community. Changes in the environment and the changing nature of their food habits (owing to the introduction of rice and a decrease in wild foods obtained from the forests) have a cumulative impact on their health and well-being. As Sannarangegowda sums it up, "We live in harmony with the animals and the natural world around us. However, with the increasing number of diseases, we no longer see people live up to 100 years. Most people in our community now live up to only about 60 years."

In order to increase awareness about wild foods, especially among the younger generation, Harisha, along with Malemleima Ningombi, has documented some precious wild foods of the Soliga and Yerava communities. The book **'Forgotten Trails: Foraging Wild Edibles'**[11] is a testament to the delicate bond these communities share with the forests around them. As the book summary states - "There is a story in every food they consume. And these stories come alive through their lived practices."

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[11]