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Role of Malayali tribals in collection of commercial non-timber forest products of Kolli hills and Yercaud hills in Eastern Ghats, Tamilnadu India

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Abstract

The study documents plant species used as non-timber forest products (NTFPs) and traditional knowledge on the utilization of these plant resources by malayali tribes of Kolli Hills and Yercaud Hills in Eastern Ghats, Tamilnadu. India. The study was exploratory and participatory in nature. A total of 30 plant species belonging to 26 genus and 22 families have been identified from the malayali community areas. Beside this certain NTFP species like *Andrographis lineata*, *Amorphophallus paeoniifolius*, *Terminalia chebula*, *Terminalia bellirica*, *Canarium strictum*, *Gloriosa superba*, *Urginea indica*, etc., are under threat of being extinct due to growing human pressure as well as habitat degradation impacted by anthropogenic activities, recent trend of climate change. Elderly persons and traditional healers of the areas pose vast knowledge on ethno medicinal practices along with various rituals in comparison of the young generation.The knowledge transformation system is quite restricted within the family. It is not only essential to conserve such a wealth of information hidden among the local people but also to apply them to modern knowledge of science and technology to meet the ever increasing requirement of mankind.

Keywords: Non-timber forest products, documents, Tribe, Traditional Knowledge

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1. Introduction

Non-Timber Forest Products (NTFPs) are important tools for addressing poverty issues for the marginalized, forest dependent communities, by contributing to livelihoods, including food security, income, health and sustainable human development (FAO, 1995; Falconer, 1997; Ahenkan and Boon, 2008). Globally, an estimated 350 million people mostly in developing countries depend on NTFPs as their primary source of income, food, nutrition, and medicine (Chandrasekharan, 1996; Olsen, 1998; UNDP, 2004; FAO, 2005). These products play a vital role in sustaining the lives of local gatherers, who must increasingly adapt to diminishing resources to stay alive. The large amount of plant species are used as NTFPs (Rawal 1997) and have great conservation and economic value (Gauli and Hauser, 2009). These resources are a key source of income and livelihood assists for many of the poorest people. In certain areas, NTFPs provide up to 50 percent of household income (Edwards, 1996). The uses of NTFP's vary from place to place because of the heterogeneity of the community and different traditional practices by ethnic groups in the country. In recognizing this economic value, forest policies have recommended sustainable NTFP management for poverty reduction and livelihood improvement by ensuring community participation in forest management (GoN, 2004). The significance of NTFPs in rural livelihood improvement and for subsistence has been established by a number of studies at the national level (Kanel, 1999; Gauli and Hauser, 2009), but little is known about their collection and marketing dynamics (Bista and Edward, 2006). Tracing the history of NTFP's exploitation reveals an over-harvesting of medicinal plants; other items are largely being ignored. The potential uses of many of the NTFP's have not being well-documented in malayali tribals despite their potential in poverty reduction and livelihood improvement amongst the indigenous people. The documentation of other uses of NTFP's is essential in the sense that it will provide choices and help the communities to improve their economic conditions by exploring more market values and potentialities. Thus, the specific purpose of this paper was to document and record the knowledge of malayali tribes on traditional uses of various NTFP's and Medicinal Plants found in and around various malayali communities of Namakkal and Salem district of Southern Eastern Ghats, Tamilnadu, India.

2. Materials and Methods

2.1 Study area

The present study carried out two tribe settlement between Kollihills (11^0 10'-11^0 30' N/ 75^0 10'-75^0 30' E) and Yercaud hills (12^0 26'N/ 78^0 50' E), both are found in the Southern Eastern Ghats, respect found in the Namakkal and Salem district. The Malayali tribes belonging to the minor communities are socially and economically the least advanced. But they are harbour a lot of knowledge on medicinal plants and also other traditional knowledge. The vanishing forest has a cascading effect on the tribal population that dwindles rapidly and along with this knowledge they hold Malayali tribal were the first invaders of the Yercaud. It is believed that they have migrated from Kanchipuram district not only to Kolli hills but also too Yercaud hills.

2.1 Data collection and analysis

Rapid Rural Appraisal (RRA) and Participatory Rural Appraisal (PRA) following Martin (1995) were conducted on the use of plants with focus on the season of availability, mode of harvest, status of the plant, personal and community choices and indigenous conservation approaches. Guidelines for the interviews and group discussions were developed to facilitate the collection of information. Altogether six community-level discussion groups were held in different malayali tribal representing an average of eight persons in each discussion group. Additional 21 key informants like plant collectors, cultivators, traditional healers, traders, community heads and district forest office staffs were purposively selected for interviews (Huntington, 2000). Prior informed consent was obtained with the help of community workers (Martin, 1995) that facilitated interviews and discussions with the local malayali tribal. Consent was granted by the local people for the dissemination of their traditional knowledge. Herbarium specimens were collected for each species and brought back to the lab to facilitate identification using reference collections.

3. Result and Discussion

The tribal communities are living in vicinity of forest since several of years and their medicine-men have inherited this good knowledge of ethno botany and local nature flora of with hidden value from their ancestors and it is passed from one generation to another through oral communication, this vital knowledge needed to be scientifically and systematically documented before it is lost due to rapid change in the malayali tribal community on an account of attaining western culture. Certain important species of NTFP's like *Andrographis lineata*, *Amorphophallus paeoniifolius*, *Terminalia chebula*, *Terminalia bellirica*, *Canarium strictum*, *Gloriosa superba* and *Urginea indica*, have become rare and are under threat of being extinct due to growing pressure as well as habitat degradation impacted by anthropogenic activities and recent trend of climate

change. In this study altogether 30 species belonging to 26 genus and 22 families were identified as important NTFPs, which were commonly used by malayali tribes. In this case, family size, agriculture income and wage income were the significant variables influencing the probability of a household going for collection of NTFPs. Family size increased the probability while the other two variables decreased the probability. Ganapathy (1998) also reported similarly in his study. Being forest inhabitants since centuries, the tribal households collected NTFPs, as it is their traditional activity. Hence, any increase in family size increased the probability of a household going in for NTFPs collection. Due to competition on NTFP, income from agriculture and wage income reduced the probability of a household going in for NTFPs collection. The modification of NTFPs gathering pattern was a process governed by clear rules of economic rationality. Not only the structure of household, but also the opportunities for income and employment outside the forest area, significantly influenced the probability in exploitation of forest goods. A clear relationship of local agriculture development and extraction of NTFP could be drawn from the analysis carried out. The stagnating local agricultural sector would force more households to involve in the NTFP gathering, which could have a hampering effect on the sustainable forest management.

Table-1: List of NTFP's found and used by malayali tribes in Kolli hills and Yercaud hills

S. No	Botanical name	Vernacular name	Family
1.	*Amorphophallus paeoniifolius* (Dennst.) Nicolson	Kattukarunai	Araceae
2.	*Andrographis lineata* wall. Ex ness	Perianangai	Acanthaceae
3.	*Artocarpus heterophyllus* lam.	Pala	Moraceae
4.	*Bambusa bambos* (L.)Voss	Moongil	Poaceae
5.	*Caesalpinia bonduc* (L.) Roxb.	Kalatchikai	Caesalpiniaceae
6.	*Canarium strictum* roxb.	Kunglium	Burseraceae
7.	*Ceiba pentandra* (L.)Gaertn.	Elavam	Bombacaceae
8.	*Dioscorea bulbifera* L.	Valli kilangu	Dioscoreaceae
9.	*Dioscorea oppositifolia* L.	Malaiyan kilangu	Dioscoreaceae
10.	*Entada rheedii* spreng	Yanai puli	Mimosaceae
11.	*Ficus hispida* L.	Peiathi	Moraceae
12.	*Gloriosa superba* L.	Kalapa kilangu	Liliaceae
13.	*Gymnema sylvestre* (retz) r.br. Ex schules.	Sirukurinjan	Asclepiadaceae
14.	*Helicteres isora* L.	Valamburi	Sterculiaceae
15.	*Hemidesmus indicus* (L.) R.br.	Nannari	Asclepiadaceae
16.	*Madhuca indica* j. F.gmel.	Ellupai	Sapotaceae
17.	*Mangifera indica* L.	Manga	Anacardiaceae
18.	*Myristica dactyloides* gaertn.	Kattu sathigai	Myristicaceae
19.	*Myristica fragrans* houtt.	Jathigaa	Myristicaceae
20.	*Ocimum gratissimum* L.	Thulasi	Lamiaceae
21.	*Phyllanthus emblica* L.	Nellikai	Euphorbiaceae
22.	*Strychnos nux-vomica* L.	Yeti	Loganiaceae
23.	*Syzygium cumini* (L.) Skeels	Naval	Myrtaceae
24.	*Tamarindus indica* L.	Puli	Caesalpiniaceae
25.	*Terminalia bellirica* (gaertn)roxb.	Thaandri	Combretaceae
26.	*Terminalia chebula* retz.	Kadukka	Combretaceae
27.	*Urginea indica* (roxb.) Kunth.	Nari vengayam	Liliaceae
28.	*Vernonia anthelmintica* (L.) Willd.	Kattu seeragam	Asteraceae
29.	*Ziziphus mauritiana* lam.	Elanthai	Rhamnaceae
30.	*Ziziphus xylocarpus* (retz) willd.	Kottai ilanthai	Rhamnaceae

3.1 Conclusion

The present study signifies that malayali tribal in Kolli hills and Yercaud hills harbor a high diversity of useful plant. Despite gradual socio-cultural transformation, the inhabitants have remarkable knowledge of plants and their uses. The reliance on folk medicines for health care is associated with the lack of modern medicines and medication, poverty and the traditional belief of its effectiveness. Generally malayali tribal use varieties of wild plants in traditional ways for their daily requirements as well as primary health care. The medicinal plants found in this territory are very useful to them who cannot afford the modern medical care. Documentation of this knowledge has provided novel information from the

area. Malayali tribal of the study area still have a strong belief in the efficacy and success of herbal medicine and traditional healing practices and prefer to continue the use of such practices. Women and elderly people have the deep knowledge. The knowledge level differed heavily with respect to generation. Overall users in malayali tribal hold positive responses towards NTFPs. The awareness among them is found increasing they are being sincere and serious about NTFPs. It is conformed by their opinion about the importance of NTFPs plant species management programs (Documentation, Identification and cultivation). The success of the conservation and sustainable use of resources, therefore largely depend upon the understanding of the people and their acceptance of the concept. That is why this study tried to assess the people's responses towards the NTFPs management. Regarding the difficulties in knowledge transformation and ignorance of new generation towards traditional knowledge there seems great danger of extinction of such healing practices. The results of the present study provide evidence that medicinal plants continue to play an important role in the healthcare system of these tribal communities. Knowledge and uses of herbal medicine for the treatment of various ailments among these ethnic groups is still a major part of their life and culture. Therefore, it is not only essential to conserve such a wealth of information hidden among these malayali tribal communities but also to apply them to modern knowledge of science and technology to meet the ever increasing obligation of mankind.

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