

Plants that Influences the Socio-cultural of *Adis* of Arunachal Pradesh

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Abstract: *Arunachal Pradesh is listed under the global mega-diversity centers. Most of the people are still forest dwellers. Survey was carried out in Adi-dominated areas of Kaying, newly formed Siang district of Arunachal Pradesh. In this article, we discuss about the use of culturally important indigenous biodiversity used by the Adi people as food, religious rites etc. A total of 42 species of wild edible plants were documented. Local people use leaves, stem, fruits, seeds and roots as a part of their diet. Most of the foods are consumed in boiled forms. Few most commonly consumed indigenous plants are Onger (*Zanthoxylum rhetsa*), Poi (*Basella rubra*), Dhenkia saag (*Diplazium esculentum*), Marsang (*Spilanthus acmella*), Ongin (*Clerodendrum colebrookianum*), and Rori (herb) and considered most dependable food plants. The other species such as banko, champa, gende, kekir, kopi, koppir, kordoi, mamang, marsang, onger, ongin, oyik, paput etc. are observed as part of both food and ethno-medicines. These plants are also a source of income and as well as the part of adaptive strategies on food security. Some of these species serve as food during famine like *Dioscorea*. Apart from these, some selected species are used for stupefying and trapping fishes like Riji (*Acacia ruguta*) and Tamu (*Polygonum pubescens*), spice, fodder like Tange (*Cyathea spinulosa*), fiber and packaging materials. Fermented products like Ekkung (Liquid Bamboo shoot) and Eyup (dry Bamboo shoot) are a major part of the diet among the tribes of Adi. Other plants like Rukji (*Pteridium aquilinum*), which is used in religious ceremony. Result reveals that Adi people are knowledgeable in accessing indigenous biodiversity to use in making culturally, nutritionally and medicinally rich foods.*

Keywords: *Wild plants, Adi community, Socio-culture, Traditional knowledge*

1. INTRODUCTION

Arunachal Pradesh is located on the Eastern Himalayan region of India is dominated by various ethnic groups. The forest type is enriched with the tropical rain forest and Himalayan ecosystem. The Arunachal Pradesh is also recognized as one of the hot spot biodiversity in the world. The indigenous tribes collectively known as Arunachali had been settling in this hilly state since time immemorial. They are separated in the different pockets of the hilly terrain and confined to their own source of livelihood, depending fully on natural, and developing the skill of utilizing the nature for the upliftment of their society. Doing so, they evolved a knowledge system for using plants for the prevention and cure of diseases and ailments and for preparing the traditional herbal drugs.

However, due to not having enough skills and organized studies, this valuable data or facts is still within the hedge of indigenous people. Very few have been documented, while much other data is waiting for documentation and scientific screening. First hand documentation and proper scientific screening of this unknown indigenous knowledge may help in the spotting of new drugs in the modern world (Mibang & Choudhuri, 2003).

A great extent of wild plant species is used by the Adi tribes including many wild green vegetable leaves, roots, seeds and fruits as food. The using of plants is strongly connected to their traditional and cultural system as they are blessed with knowledge. The benefaction of the wild edibles to the diet and penny-pinching of the local people is often important and therefore emphasis on these species should be privileged. Incorporation of wild plants into the farming system will not only protect biodiversity but also give sufficient food and contribute to the rural economy (Angami *et al*, 2006).

The culturally important plant technologies like chair, table, kitchen utensils, fishing nets and tools, dishes, tools for storage and preservation, etc made of plants are most popular and economically possible among *Adis* (Singh *et al*, 2007). They have their own culture traditions, religious rites, food

habits and medicinal system of treatments (Sharma & Borthakur, 2008). They are reserve house of traditional knowledge which is yet to be demonstrated (Srivastava *et al*, 2009). In the ongoing paper, we discuss the ethno-botanical and culture related aspects of significant indigenous foods adapted by *Adi* tribe.

2. MATERIAL AND METHODS

A Field survey was done with the help of knowledgeable local people for collection and study. Plant species were identified from their vernacular names and ethnobotanical information were recorded (Kar, 2004). For selection of priority species, questionnaires were used (Guy-Alain & Francois, 2001). Informants were selected randomly representing both sex and age groups. Important wild plants were selected on the basis of 'Free listing' method on the principle that the more important species are probably to be mentioned by several respondents (Cotton, 1996). Collection of plant samples and preparation of herbarium specimens were done as per of the prescribed methodology (Jain & Rao, 1977). The specimens were identified with the help of various relevant taxonomic literatures and with consultation of herbarium specimens at State Forest Research Institute, Itanagar (A.P.), Botanical Survey of India (BSI), Itanagar (A.P.) and BSI, Shillong (Meghalaya).

2.1. Study Area

The *Adi* tribe is one of the major tribe of Arunachal Pradesh, located in the Eastern Himalayan hills. The Survey was carried out in most of the districts of Arunachal Pradesh where the *Adi* Tribes is inhabited most, including the different geographical zones. They are mostly found in sub-tropical region of districts such as West Siang, East Siang, Upper Siang, Siang, Upper Subansiri, and Dibang Villay. To carry out this study, Siang district was selected purposively based on the ethnicity, dependency on forest resources, culturally-laden region, diversity and plant resources, and diversity of ethnic groups among *Adi* Tribe (*Kebo-Kerang, Padam, Minyong* and *Pangi*) (Singh *et al*, 2012). A representative number of 5 villages namely Kaying, Kerang, Riga, Pangin and Boleng were selected randomly for conducting this study.

3. RESULTS AND DISCUSSION

In the present study, about 33 wild plants species has been documented (Table 1). The tree and herb species are mostly used by *Adi* Tribes, while the climber species are least used, was observed. They mostly consume fruits and leaves however, other plant parts like barks, flowers, tubers, stem etc. were used infrequently. Some of the species like Bangko (*Solanum nigrum*), Basak oying (*Phlogacanthus sp*), Marchang (*Spilanthes acmella*), Nakling (*Gynura cusimbua*), Okung (*Polygonum chinense*), Onger (*Zanthoxylum armatum*), Ongin/Oin (*Clerodendrum colebrookianum*), Yepetare (*Paederia scandens*), etc were important for the medicinal purpose. The wild plants play an important role in supplementing other foods, especially in tribal society.

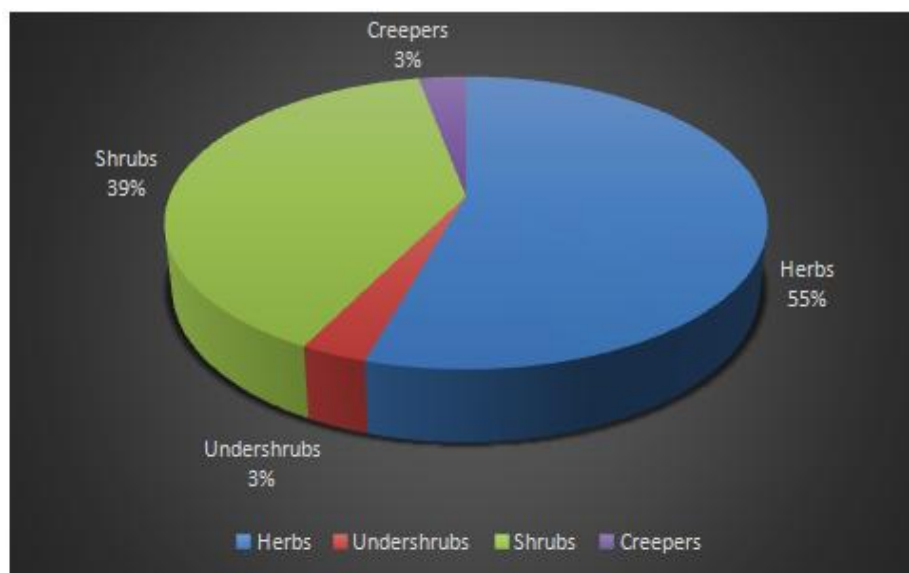


Fig1. Percentage of growth forms of Ethnobotanicals from *Adi* community

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Table 1. *Enthnobotanicals explored from Adi community*

Sl. No.	Plant name	Local Name	Family	Habit	Plants used
1	<i>Alleum hookeri</i>	Dilap	Liliaceae	Herb	Whole plant
2	<i>Baliospermum calycinum</i>	Gilgal	Euphorniaceae	Herb	Leaves
3	<i>Bauhinea variegata</i>	Ogok	Caesalpiniaceae	Herb	Whole plant
4	<i>Begonia griffithiana</i>	Sudum Meko	Begoniaceae	Herb	Leaves
5	<i>Blumea fistulosa</i>	Rumdum	Asteraceae	Herb	Leaves
6	<i>Cardamine hirsute</i>	Tuka	Brassicaceae	Herb	Whole plant
7	<i>Clerodendrum colebrookianum</i>	Ongin	Verbenaceae	Shrub	Leaves
8	<i>Diplezium esculentum</i>	Takang/Dhekia saag	Athyriaceae	Herb	Tender Leaf
9	<i>Elastostema sessile</i>	Obur	Urticaceae	Shrub	Leaves
10	<i>Eryngium foetidum</i>	Adi dhaniya	Apiaceae	Herb	Leaves
11	<i>Fagopyrum dibotrys</i>	Okung	Polygonaceae	Shrub	Whole plant
12	<i>Fagopyrum esculantum</i>	Amintatek	Polygonaceae	Shrub	Whole plant
13	<i>Glochidion multiloculare</i>	Gaam Oying	Phyllanthaceae	Shrub	Leaves
14	<i>Gnepalium affine</i>	Paput	Asteraceae	Herb	Tender Leaf
15	<i>Gynura cripidioides</i>	Gende/illi	Asteraceae	Herb	Tender leaf
16	<i>Gynura cusimbua</i>	Ogen	Asteraceae	Herb	Tender leaf
17	<i>Houttuynia cordata</i>	Roram	Saururaceae	Creepers	Tender leaf
18	<i>Mussaenda roxburghii</i>	Akshap	Rubiaceae	Shrub	Tender leaf
19	<i>Oxalis corniculata</i>	Phakep	Oxalidaee	Herb	Whole plant
20	<i>Paederia foetida</i>	Yepetare	Rubiaceae	Shrub	Leaves
21	<i>Piper pedicellatum</i>	Rori	Piperaceae	Shrub	Leaves
22	<i>Plantago erosa</i>	Doni-hankang	Plantaginaceae	Herb	Leaves
23	<i>Plantago major</i>	Nane gitbung	Plantaginaceae	Herb	Leaves
24	<i>Portulaca oleracea</i>	Gubar Oying	Portulacaceae	herb	Whole plant
25	<i>Pouzolzia hirta</i>	Oyik	Urticaceae	Herb	Tender Leaf
26	<i>Sida acuta</i>	Tanngom	Malvaceae	Undershrub	Whole plant
27	<i>Solanum nigrum</i>	Yang-ga	Solanaceae	Herb	Whole plant
28	<i>Solanum spirale</i>	Bangko	Solanaceae	Shrub	Tender Leaf
29	<i>Sonchus sp</i>	Ogon	Asteraceae	Shrub	Leaves
30	<i>Spilanthus acmella</i>	Marsang	Asteraceae	Herb	Tender leaf
31	<i>Spiradiclis bifida</i>	Sokho	Rubiaceae	Shrub	Leaves
32	<i>Urtica dioica</i>	Osut-Oyit	Urticaceae	Shrub	Leaves
33	<i>Zanthoxylum rhesta</i>	Onger	Rutaceae	Shrub	Tender Leaf

The plants like Aamun esing (*Syzygium cuminii*), Bangko (*Solanum nigrum*), Kopak (*Musa sp*), Kompe (*Prunus persica*), Kukto Belo (*Ficus sp*), Roram (*Houttuynia cordata*), Rukji (*Diplazium esculantum*), Tuka (*Cardamine hirsute*), etc are gathered from wild as well as from kitchen garden for consumption and for sale in the market to supplement their family income.

Some of the plant species serve as food during famine like Engin (*Dioscorea*). Apart from these, some selected species are used for stupefying and trapping fishes like Riji (*Acacia ruguta*) and Tamu (*Polygonum pubescens*), spice, fodder like Tange (*Cyathea spinulosa*), fiber and packaging materials. Fermented products like *Ekkung* (Liquid Bamboo shoot) and *Eyup* (dry Bamboo shoot) are a major part of the diet among the tribes of *Adi*. Other plants like Ammong Rukji (*Pteridium aquilinum*), which is used in religious ceremony. Some others have more uses such as Onger (*Zanthoxylum sp*), which are used for fishing and also for curing various diseases.

4. CONCLUSION

Gathering and harvesting of food from forest is a usual activity of the *Adi* tribe. Using of this forest products not only add the food shortage but also would supplement the essential nutritional requirements of the local people. These also improve the economic level of that locality. Some of the important species having medicinal value can be developing into new herbal pharmaceuticals purpose.

The recapturing of the knowledge and practices may be a significant strategy linked to the conservation of biodiversity. There is still need for documentation of Indigenous Knowledge related to the unexplored cultural heritage regarding traditional plant uses (Kagyung *et al*, 2010).

ACKNOWLEDGEMENT

Authors gratefully acknowledge to the local people of the study area for their help and support during the survey and especially to the Head Gaun Burah of Kaying, Kareng, Riga, Pagin and Boleng. Help of Dr. Ayam Victor Singh, Assistant Professor, Rajiv Gandhi University, Arunachal Pradesh, in the study work is gratefully acknowledged.

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