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Exploration and Documentation of Some Scarcity Food Plants Used By the Aboriginals from Gadchiroli District (M.S.) India

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Abstract: Gadchiroli district is the Easternmost and largest district of Maharashtra (India), and 76% of land is covered by forest which is also one of most backward region in Maharashtra and India too and having majority of aboriginal population. Various tribal packets are still off-road and off-development. Tribals of this are still in harmony with nature they produce the food of their basic needs but their produce is not sufficient to last long therefore they face scarcity of resources. The documentation of Indigenous knowledge is one of the urgent needs of time because as the time will pass the old age generations will pass away and with them the valuable indigenous knowledge too. In present study the authors have documented 32 taxa from 25 families with their method of use by the tribal population. No such investigation has been carried out in Gadchiroli district of Maharashtra state (India) prior to this attempt.

Keywords: Scarcity food, Wild edible, Aboriginal, Tribal, Ethno botany, Indigenous Knowledge, Gadchiroli.

I. INTRODUCTION

The documentation of Indigenous knowledge is one of the urgent needs of time as the modernization is fascinating people like anything and the aboriginal people too are also becoming use to it. So the present work deal with scarcity food used by the aboriginals in past and present and its documentation. Since after the decade of 80's as green revolution happened, famine or scarcity of food never troubled India in urban and rural areas or even in tribal packets too, so major scope for study is actually been lost but still we have the old aged population, aged more than 50+ who had faced the famine and scarcity of food during their life. So they were the prime asset of indigenous knowledge. Still this population has to eat the scarcity food during some period of time as the need for survival. And in very remote area like Binagunda, Kuwakodi, Ghodezari, Gadapalli etc. in Gadchiroli district which are still real off-road and off-communication the real scarcity of food is been faced and the people residing there then use the resources and full feel their food demands through the scarcity food.

II. METHODOLOGY

The Ethnobotanical investigations were undertaken in the study area with respect to study the plants used as scarcity food during early 2014 to end of 2015. Different parts of Gadchiroli district were frequently visited including Northernmost Korchi Tehsil to Southernmost Sironcha Tehsil to Easternmost Bhamragad Tehsil to Westernmost Chamorshi Tehsil including extreme terrain like Binagunda which is highly threatened Naxal prone area, and information on indigenous knowledge about wild Scarcity food and tribal food preparation was collected from knowledgeable people in the region. Data was collected using semi-structured questionnaire and group discussions based on the standard procedures and the guided by field-walk methods. as per Jain(1989), Martin(1995) and Maundu (1995) [1][2][3] and the plants were identified using standard floras of the area[4][5][6][7] .

Earlier work:

In the past Irvine (1957) gave a noteworthy account of indigenous, supplementary and emergency food plants from Australian and Tasmanian aborigines residing in Australia and adjoining areas[4]. Paul et al. (2011) in Hatimara Village of Rangamati District, Bangladesh studied scarcity food plants used by Chakma people and investigated 15 plant species used by them [5]. Azam et al.(2014) had studied on scarcity and famine food plants on over 200 informants from 167 households in the villages, in two Districts of Bangladesh and mentioned a total of 34 plant species that they consumed during famine and scarcity[6]. Joshi and Awasthi (1991) documented the life support plant species used in famine by the tribals of Aravallies[7]. Swarnkar and Katewa (2008) reported 42 tuberous plants of Ethnobotanical interest from Aravalli hills of Rajasthan by studying various tribes during scarcity of food[8].

Observations:

The tribal population inhabiting since time innumerable on this patch of land belongs to Gond, Raj Gond, Madia, Mana, Pardhan, Kanwar etc. along with some other backward class people and general. The land is blessed with beautiful forest and rivers so food sources were already been supplied by Mother Nature to the inhabitants, she has made arrangement of food source for every season

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but during a particular scale of time the shortage of food is felt so we have studied this shortage food supplements in this study and the observations are presented in a tabulated format **(Table-1.)** and the information arranged in a sequence like Serial number, Vernacular name, Scientific name and Family, Habit, Plant parts used and Method of consumption. About 32 plant species were used as scarcity food. Further the habit wise analysis of plant surveyed was done.

III. RESULTS AND DISCUSSION

Government has taken initiatives to make any population famine free and providing the food grains and pulses on very cheap rate to the extreme parts of country, still the tribal population lives the life in their own ways hunter and gathering of food from the adjoin forest is still practiced in some remote tribal packets and during the scarce tribal people have to depend on non-conventional food sources to satiate their hunger and meet their nutritional needs. From all such areas over hundreds of informants provided information about a sum of 32 plants consumed during food scarcity from various locations of Gadchiroli District. These plants were herbs(4), shrubs(3), trees(16) and climbers(9) **(Figure-1)** distributed into 25 families, out of which 21 are dicots and 4 are monocots which are arranged alphabetically followed by local names, family, habit and method of consumption of the studied plant **(Table-1)**. The plant parts consumed were underground petiole(1), leaves(6), flowers(4), thalamus(1), fruits(15), seeds(5), sprouts(1), corms(2), bulbs(1) and root tubers(2) where fruits are found to be the major plant part consumed out of the 32 plant mentioned **(Figure-2)**. Colocasia esculenta (L.) Schott is one the important plant in feeding the tribal population all over the world during famine and various workers like Lentz (1993) from Honduras in Central America[13]; Addis et al.(2005) from Ethiopia[14] and Biswas & Rahmatullah (2011) from Bangladesh[15], etc have already reported it somewhat similar or different fashion. Madhuca longifolia (Koen.) Mac Bride and Bauhinia vahlii Wight & Arn. are considered as holy plant by the tribal which fulfill their most needs with almost every part so often given a status of mother in nurturing the tribal population. Whereas seed of Xylia xylocarpa (Roxb.) Taub. are reported first time used as food.

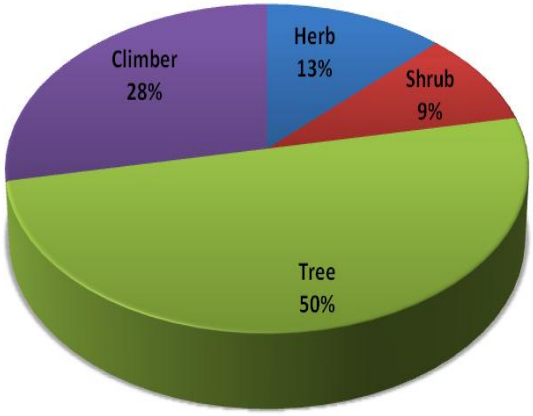

Figure 1- Habit wise analysis of plants surveyed.

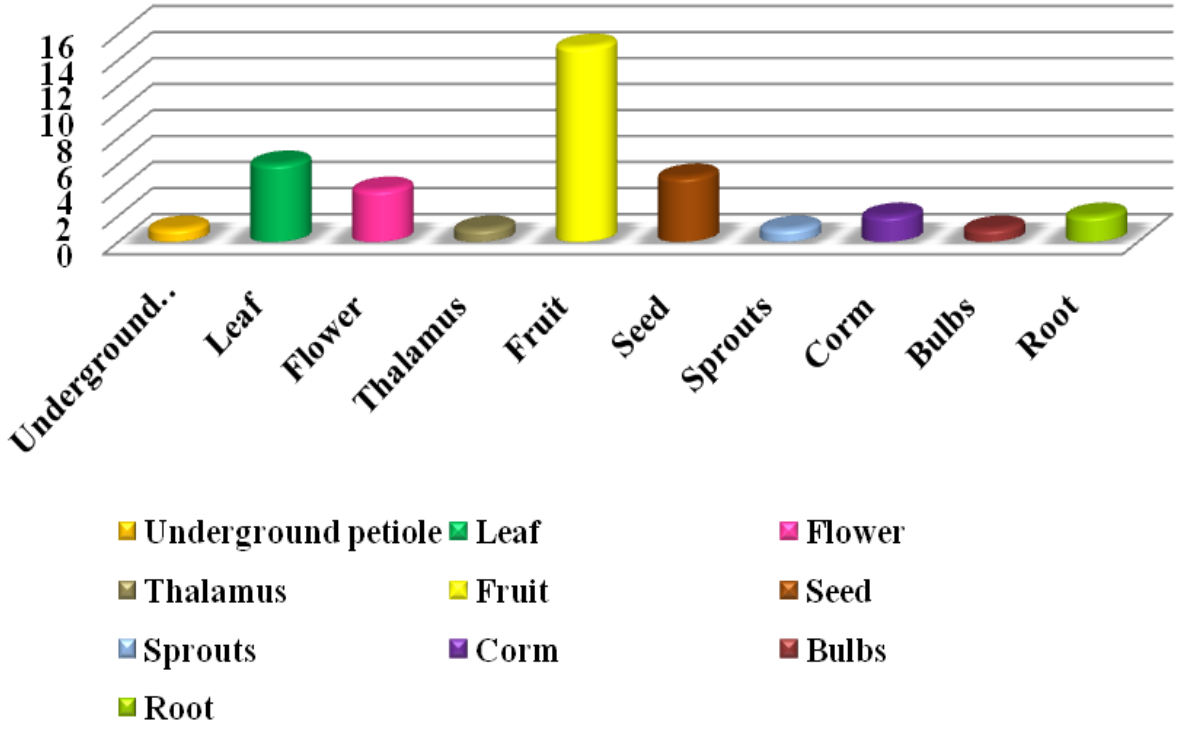

Figure 2- Edible plant parts during scarcity of food.

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Table 1 - Scarcity food plants and method of consumption

S. N.	Vernacular Name	Scientific Name Family	Habit	Edible Plant Part	Method of Consumption
1	Aakola, Ankol	Alangium salvifolium (L. f.) Wangerin Alangiaceae	Tree	Fruit	Ripened Fruits are eaten.
2	Bramha Rakshas	Alocasia macrorhiza (L.) G. Don Araceae	Herb	Corm	Corms are excavated and then cleaned and boiled and eaten during famine.
3	Baswrael, Widhara, Samudrasok	Argyreia nervosa (Burm.f.) Bojer Convolvulaceae	Climber	Leaf	Wheat flour paste is applied over the leaf from both side and steamed, after that chopped to small pieces and fries are made and consumed as food.
4	Vaavding	Basella alba L. Basellaceae	Climber	Leaf	Leaves are chopped and used to make Dalbhaji. Gram flour paste is applied over Leaf surface and fried in oil to make Pakode.
5	Pawur	Bauhinia vahlii Wight & Arn. Caesalpiniaceae	Woody Climber	Seed	Seeds are roasted and eaten as food.
6	Taad	Borassus flabellifer L. Arecaceae	Tree	Fruit, Sprouts	Fruits are eaten. Whole mature fruit is buried into pit and after successful germination the sprouts are plucked and boiled and eaten.
7	Charoli, Rekka	Buchanania cochinchinensis (Lour.) Almeida Anacardiaceae	Tree	Fruit	Ripened fruits are eaten. Dired seed
8	Rui	Calotropis procera (Ait.) R. Br. Asclepidaceae	Shrub	Fruit	Raw fruits are pilled of and chopped into small pieces and cooked as vegetable.
9	Varakli, Waakula	Capparis zeylanica Linn. Capparaceae	Climber	Fruit	Raw fruits are cooked as vegetable.
10	Bahava, Rela	Cassia fistula L. Caesalpiniaceae	Tree	Leaf, Flower	Tender Leaves are plucked and cooked as vegetable. Fresh petals are cooked as vegetable.
11	Pimpli cha baar, Warandul Tonda	Celastrus paniculatus Willd. Celastraceae	Climber	Flower	Flowers are boiled and water is removed and cooked as vegetable.
12	Kohweli	Chlorophytum sp. Liliaceae	Herb	Flower, Root	Flowers are boiled and water is removed and cooked as vegetable. Root tuber are eaten raw.
13	Washin	Cocculus hirsutus (L.) Theob. Menispermaceae	Climber	Leaf	Leaves are cooked as vegetable.
14	Dhopa, Dobe	Colocasia esculenta (L.) Schott Araceae	Herb	Leaf, Corm	Corms are excavated and then cleaned and boiled and eaten during famine.

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15	Shembadi, Shelvati	Cordia dichotoma Forst. Boraginaceae	Tree	Fruit	Raw fruits are used to cook vegetable and pickle. Ripened fruits are eaten.
16	Michad mara, Ran Keli	Dillenia pentagyna Roxb. Dilleniaceae	Tree	Fruit	Ripened fruits are eaten.
17	Mataru, Kaimul maati	Dioscorea bulbifera L. Dioscoreaceae	Climber	Bulbs	Bulbs are boiled or roasted and eaten as food.
18	Momnaru	Dioscorea bulbifera L. var sativa Dioscoreaceae	Climber	Root	Root are boiled and scaled and eaten as food.
19	Tembhru, Tumri	Diospyros melanoxylon Roxb. Ebenaceae	Tree	Fruit	Ripened fruits are eaten.
20	Tirka	Diospyros peregrina (Gaertn.) Guerke Ebenaceae	Tree	Fruit	Ripened fruits are eaten.
21	Kuda, Palod	Holarrhena pubescens (Buch.-Ham.) Wall. ex G. Don. Apocynaceae	Tree	Flower, Fruit	Flowers are boiled and water is removed and cooked as vegetable.
22	Yensadad	Holoptelea integrifolia (Roxb.) Planch. Ulmaceae	Tree	Seed	Seeds are roasted and eaten as food.
23	Moha, Irpi	Madhuca longifolia (Koen.) Mac Bride Sapotaceae	Tree	Flower, Fruit	Fleshy flowers are boiled and along with the Pepper, Salt and dried Ziziphus sp. Fruits and eaten as food. (This was most preferred scarcity food among tribal community.)
24	Kamal, Bhishi chya biya	Nilumbo nucifera Gaertn Nelumbonaceae	Herb	Seed	Seeds are eaten raw and roasted.
25	Haratfari, Korpa jappi	Olax psittacorum (Willd.) Vahl Olacaceae	Climber	Leaf	Tender leaves and shoots are plucked and boiled and cooked as vegetable. Some people add boiled Bengal Gram too.
26	Bhui Shindi, Metta heendi	Phoenix acaulis Roxb. Arecaceae	Shrub	Fruit, Undergrou nd Petiole	Ripened fruits are eaten. Underground petiole (Finger-length) is scaled and eaten raw.
27	Shindi, Gaavthi hindi	Phoenix sylvestris (L.) Roxb. Arecaceae	Tree	Fruit	Ripened fruits are eaten.
28	Kojub, Kusum	Schleichera oleosa (Lour.) Oken Sapindaceae	Tree	Fruit	Ripened fruits are eaten.
29	Biba, Kohka	Semecarpus anacardium L. f. Anacardiaceae	Tree	Thalamus	Ripened thalamus is eaten.
30		Solanum torvum Swartz. Solanaceae	Shrub	Fruit	Fruits are chopped and cooked as vegetable.
31	Behada, Taahaka	Terminalia bellirica (Gaertn.) Roxb. Combretaceae	Tree	Seed	Testa is removed and endosperm is eaten.
32	Surya, Kadhai	Xylia xylocarpa (Roxb.) Taub. Mimosaceae	Tree	Seed	Seeds dried and are roasted and eaten as food.

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