



POTENTIAL USE OF WILD EDIBLE PLANTS FROM ARJUNI MORGAON TEHSIL OF GONDIA DISTRICT (MS), INDIA

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ABSTRACT:

Wild edible medicinal plants play important contribution to the livelihood of the households who gather and consume them. The use of non-timber forest products (NTFPs) is well known. Wild edible plants play a significant role in the sustenance of forest people residing in forested areas. A scientific study of edible wild plants is important for pin pointing the potential sources which could be even utilized at the time of scarcity and cultivated as well as a source of food for the growing population. In view of this, the present work was undertaken which documents as many as 60 plant species belonging to 55 genera and 41 families. Survey of wild edible medicinal plants has been carried out in 10 villages of Arjuni Mor tehsil of Gondia district, Maharashtra, India. The study showed that the plants used are either eaten raw, cooked by boiling in water, frying in oil or baked to be served as dishes such as stew, salad as hot drink.

Key words: - Wild edible plant, NTFPs, forest dwellers and Traditional knowledge.

INTRODUCTION:

Millions of people in many developing countries depend on wild resources including wild edible plants to meet their food needs especially in periods of food crisis (Balemie and Kebebew 2006). Many wild edible plants are nutritionally rich (Ogle and Grivetti 1985) and can supplement nutritional requirements, especially vitamins and micronutrients. Kaur *et al.*, (2011) studied on nutritional aspects of unconventional food consumed by gond and korku tribes inhabiting in Vidarbha. Realizing this fact, the use and conservation of wild edible plants in India has been emphasized by Arora and Pandey (1996).

The usage of wild edible plants is also common in many European countries. For example, several hundred wild plants are being used in human nutrition in Italy (Guarrera, 2003). In other parts of the world, such as in southeastern Asia, wild plants are highly valued as an important food source, as well. Investigations carried out by Britta *et al.*, (2003) have showed that over 90 species of edible wild plants are being used in Vietnam, of which many are also a necessary part of human medicine. Usage of wild edible plants as a nutrition is well documented among inhabitants of South America, where several hundred species have been recorded (Ladio&Lozada, 2000a, 2000b, 2000c, 2001, 2004; Hanazakiet *al.*, 2000).

The utilization of wild plants and animals continues to greatly benefit society to this day, from processes mostly involving local experimentation through indigenous and local knowledge (Ladio and Lozada, 2004; Scherreret *et al.*, 2005).

In Maharashtra, Susala Island of Pune district studied by Vartak and Suryanarayana (1995) have reported 130 wild edible plants, which provide food during food scarcity and famine. Zode *et al.* (2016) reported the forest products in the form of NTFPs in Nagbhir tehsil of Chandrapur district (MS) and stated the importance in the socio-economic security net on the forest dwellers.

Similarly Zode *et al.* (2014) estimated that, total 45 plants were identified as NTFPs. Out of 45 plants, 26 plants were observed as Edible, 4 plants were used for construction purposes and 15 and 31 plants are used for commercial and medicinal purposes, respectively in Tirora tehsil of Gondia district.

Zode *et al.* (2015) studied in few villages of Gondia district and observed that, the people of the region are living in remote area which is covered by large forest and therefore they are more dependent on the NTFPs. He also analysed that, Tribal peoples are more dependent on NTFPs.

In view of this, the present authors felt the urgency of documenting the indigenous traditional knowledge from the local inhabitants the edible use of wild plants growing in their ambience.

MATERIAL & METHODS

Study area:

Selection of villages and sampling design:

The study was carried out in the Arjuni Mor tehsil of Gondia district (Figure 1.1 & 1.2). The present study has been restricted to 10 forest villages of Arjuni Mor where majority of the tribal gather

NTFPs products from forest area. These villages were chosen on the basis of forest area, their location in and around the forests. In each village 5 households were sampled also by random sampling. Therefore, total number of household surveyed was fifteen.

Data collection:

The field data was collected during 2015 to 2016 through survey. The study includes primary sources of data. The Primary data was collected through Participatory Rural Appraisal (PRA), group discussion, semi-structured interviews and household survey (Martin, 1995; Prettyet *et al.*, 1995). The questionnaire was prepared after extensive preliminary survey that helped to select the relevant villages for sampling in the study area. The information was collected through personal conversation with local inhabitants and tribal peoples and also through market surveys. Gondia were contacted to collect the information regarding edible plants of that particular region. The data was also generated for preparation of some recipes. Interviews were conducted in selected villages. The questionnaire was made to pre-testing during initial survey to improve it. Questions were asked in local language i.e. in Marathi and Hindi. Each respondent gave about 10-20 minutes for interview. Documentation and correct identification of the species was done in the field itself. The identity of some of the taxa was confirmed on the basis of specimens which are prepared from the collection by referring the available literature, viz., The Flora of the Presidency of Bombay (Cooke, 1901-1908); Flora of Maharashtra State (Sharma *et al.*, 1996, Singh & Karthikeyan, 2000, and Singh *et al.*, 2001); Flora of Maharashtra (Almeida, 1996-2004).

RESULT AND DISCUSSION

Since the people are associated with Traditional knowledge (TK) about uses in edible purpose have been systematically arranged. Non-timber forest products (NTFPs) are wild plant products harvested from forests. Since NTFPs play an important role in the livelihood of rural and forest-dwelling communities

An analysis of the wild edible species concerned with the documented TK and dependence of the forest dwellers residing in study areas shows that angiosperms have major contribution in the “non-timber forest products” used in edible purpose. There are total 60 NTFPs species of 55 genera representing 41 families used in edible purpose. Of these, 45 species of 41 genera belong to 30 families of Dicotyledons. The Monocotyledons on the other hand contribute to NTFPs in the form of 11 species; belong to 10 genera of 7 families. Thus the dicots appear to be more used than monocots, the ratio at the level of families, genera and species being 4:2, 4:3 and 4:5 respectively (Table 1.1). Therefore, it concludes that greater dependency of the forest dwellers is on dicots than monocots (Figure 1.3).

This might lead to their depletion if the consumption is ruthless and irrational. As such there should be a periodic investigation of the flora of the place together with the assessment of their exploitation.

In addition to the angiosperms, the documented NTFPs include two family, genus and species of Pteridophyte, the name of the species being *Marsilea quadrifolia* and *Lygodium flexuosum* whereas two family, genus and species of fungi, the name of the species is *Termitomyces* species and *Agaricus* species.

Mostly used family from Dicot is Caesalpinaceae, contributing 4 species towards NTFPs followed by Anacardiaceae, Rhamnaceae, each of which

contribute 3 species each. Two species of Amaranthaceae, Annonaceae, Apocynaceae, Boraginaceae, Cucurbitaceae, Euphorbiaceae, Mimosaceae, Rutaceae were recorded to be in use. Among monocots the mostly used families are Araceae, Dioscoriaceae, Poaceae which contribute two species in use as NTFPs in the study area (Figure 1.4).

An analysis of habit of the NTFPs generating species reveals that out of 60 NTFPs species 28 (46 %) are trees, 10 (17 %) shrubs, 16 (27 %) herbs and 4 (7 %) climbers and remaining 2 (3 %) are fungi (Figure 1.5). Tree species are exploited more than others i.e. shrubs, herbs and climbers. A good number of species of herbs is used in contrast to shrubs and climbers. This observation is rather encouraging from conservational purview, since the indigenous traditional knowledge was found to spare trees from felling. The knowledge of the forest dwellers regarding non-timber use of wide range of species of trees thus deserves appreciation. Since, the non-timber use of trees has a direct bearing on sustenance of the community together with stability of the ecosystem.

Furthermore, the heterogeneity as observed in the plant habit based vertical stratification of the forest community seems to have been maintained by the forest dwellers, which is apparent from the use pattern of herbs, shrubs and climbers. Use of a few species of herbs and low number of shrubs means lesser interference with and exploitation of the forest floor and under stories thus affording at least a three-story vertical stratification. Maintenance of this kind of vertical stratification is of prime importance in rendering stability to the forest ecosystem. As the forest is associated with human settlement, different biotic and anthropogenic stress factors, chances for the

impoverishment of the flora are not unlikely. As such, the Forest Department has been planting many of the indigenous species periodically for promoting ecological welfare of the forest in some occasions.

The results of the present study revealed that the status of total 60 NTFPs species in the study area is concerned, only 8 species, i.e. 13 % were found to be rare and less common categories. The remaining species were observed to belong to “very common” (30 species i.e. 50 %), “common” (14 species i.e. 23 %) (Figure 1.6). All these categories were qualitatively assessed through visual observations during field trips covering all seasons and are expressed only in the context of the local status of the species in the forests under study.

The taxa names of plant food resources and the parts used are enumerated in the table 1.1. In the present study as many as 60 edible wild plant have been documented (Table 1.3). Which are used to cater nutritional requirements of various forest dwellers of Arjuni Mortehsil of Gondia district. There were found that near about 13 plant parts used for edible purpose. The edible parts of these plants include ripe fruits from 30 species, unripe fruits from 10, leaves from 7 species and flowers from 6 species used. Similarly other parts such as seeds, leafy twigs, rhizomes, young leaves from 3 species each used for edible purpose. Edible tubers and fruiting body collected from two species each. While remaining plant parts such stem bark, young stem, young inflorescence also collected from 1 species each (Figure 1.7).

According to local tradition, wild edible plants are consumed in many different ways and are prepared using diverse recipes. An analysis of the documented plants on the basis of their mode of consumption was also tabulated under the categories: eaten raw, only cooked, raw and

cooked, raw and pickled and used as flavouring agents. From the 60 wild edible plants, 24 species are eaten raw, 24 species cooked as vegetable and 3 plant species eaten as raw as well as cooked. As many as 4 plant species used for both purpose such as to prepare pickled or *chatney* and also eaten as raw. Similarly other 4 species used as flavouring agent while only 2 species used to prepare pickled and eaten as cooked (Figure 1.8). Cooked and raw recipes constitute similar percentage i.e. 39% of the modes of consumption while other edibles follow with the relatively less percentage.

The result shows that 72 plant parts were used out of the 60 edible plants recorded in the study area. This means that more than one part of the species was consumed by forest dwellers. The result indicates that 12 number of plant parts exceeds the number of available plants in the study area. The highest consumption of edibleplant part comes from fruits followed by the unripe fruits. The study also revealed that tree species provide highest edible part for consumption.

As most of the indigenous people live in forests and live mostly below poverty level, they have to depend heavily on the forest flora even to provide food to their cattle. As such the forest resources are likely to be overexploited and eventually depleted to an impoverished state. In view of this, forests need to be strategically restored collaterally with economic welfare of the associated people.

The threat perception was analyzed by segregating the documented plants on the basis of their parts consumed and it was found that the species whose ripe and unripe fruits, seed, flowers, rhizome, tubers, stem bark, and fruiting body are consumed are exposed to high threat perception, whereas, the plant species whose leafy twig, young leaves,

leaves, young stem and young inflorescences are consumed face low threat perception (Table 1.2). The number of species whose ripe fruits parts is consumed is 30; unripe fruits 10; flowers 6; seeds 3; leaf twig 3; rhizome 3 and young leaves 3, tubers 2, leaves 7, stem bark 1, young stem 1, young inflorescences 1 and fruiting body in number.

In the present study medicinal wild vegetable species reported. Many wild vegetables are also being consumed for various medicinal purposes. The demarcation line between food and medicine may not always be clear. For example, *Achyranthes aspera*, leaf juice is used against cough, *Alteranthera sessilis* is against jaundice; *Boerhavia diffusa*, is against liver diseases (Jain, 2010).

The contents of the wild vegetables also protect our body against various malnutrition, and nutrient disorders. Furthermore, in a study conducted by FAO,(1999) it has been reported that wild foods are the parts of rural people diet not only during the periods of food shortage but also on the daily basis.

Kanitribals claim that one can live energetically without food for long days and perform rigorous physical work after consumption of a few fruits of this plant daily (Pushpangadan *et al.*, 1988). Tribal communities consume wild tubers, rhizomes and corms either in raw or baked or boiled or roasted form. Tender shoots, flowers, leaves, pods, young fruits, etc. Efforts were also made to explore the nutritive potential of wild edible tubers, rhizomes, leafy vegetables and wild fruits which supplement several nutrients particularly calcium and carotenoids. Such unconventional wild edible plants are sources of fats, proteins, rich source of

micro-nutrients and trace elements (Nilegaonkar *et al.*, 1985; Kulkarni *et al.*, 2003, Kulkarni, 2006).

Some documented vegetables analyses report that wild plants like *Dioscoreapentaphylla* and *D.bulbifera*, with rich crude fiber; (Price *et al.*,1987).According to Gupthaet *al.*,(2010) *Boerhaviadiffusa* are used against urinary disorders. Tuber of *Dioscorea bulbifera* is used to avoid intestinal worms (Tayade and Patil,2006). According to Etkin, (1994) wild foods are consumed not only for caloric value, but also for other nutrient and pharmacologic potential.

Conclusion:

Forest resources, mainly plants and plant products, have an important place in the daily life of tribals and other forest dwellers. The tribal communities are largely dependent on the forest produce for their sustenance. Forest provides food as Forest products (NTFPS) that are essential not only for meeting their own requirements, but these are also a potential source of their income for livelihood.

Wild plants are reported to be edible and easily accessible even during adverse conditions like drought and famine. Such wild species are accepted like other cultivated species and they play an important role in solving the various food problems of the world. India is in the second position in population as well as vegetable production.

Domesticated vegetables have been selectively bred for look, production quality, taste, length of storage, and qualities other than nutrition and these vegetables sold in the market are exposed to various pesticides, herbicides, and variety of other chemicals and they have been genetically modified or irradiated. At this context safety of eating is a general concern. Wild foods don't have these problems.

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REFERENCES

- Almeida, M. R.(1996). *Flora of Maharashtra*, Vol. I (Ranunculaceae - Sabiaceae). St. Xeviers College, Mumbai, Orient Press, Mumbai.
- Almeida, M. R.(2001). *Flora of Maharashtra*, Vol. IIIA (Rubiaceae to Ehretiaceae) & IIIB (Cuscutaceae to Martyniaceae). St. Xeviers College, Mumbai, Orient Press, Mumbai.
- Almeida, M. R.(2004). *Flora of Maharashtra*, Vol. VI (Acanthaceae to Ceratophyllaceae). St. Xeviers College, Mumbai, Orient Press, Mumbai.
- Almeida, M. R. 1998. *Flora of Maharashtra*, Vol. II (Fabaceae - Caprifoliaceae). St. Xeviers College, Mumbai, Orient Press, Mumbai.
- Arora, R. K. & Pandey, A.(1996). *Wild Edible Plants of India: Conservation and Use*. National Bureau of plant Genetic Resources, New Delhi, India.
- Balemie, K. &Kebebew, F. (2006). Ethnobotanical study of wild edible plants in Derashe and Kucha Districts, South Ethiopia. *Journal of Ethnobiology and Ethnomedicine* 2:53.
- Britta, M.O., Ho T., Duyet T., Nghia H., Dung X.&Nhut N.. (2003). Food, feed or medicine: The multiple functions of edible wild plants in Vietnam. *Econ. Bot.*, 57(1): 103-117.
- Cooke, T.(1901-1908). *The Flora of the Presidency of Bombay*. London, Vol. I & II. (BSI Calcutta, Vol. I-III. Reprint 1958).
- Etkin, N.L. (1994). The call of wild, In: *Eating on the Wild side*, by N.L. Etkin (Ed.) university of Arizona Press, Trizona. pp.1-21.
- FAO, (1999). *Unasylya- No. 198-Non-Wood Forest Products and Income Generation* vol. 50.
- Guarrera P. M. (2003) Food medicine and minor nourishment in the folk traditions of Central Italy (Marche, Abruzzo and Latium). *Fitoterapia* 74(6):515-544.
- [http://dx.doi.org/10.1016/S0367-326X\(03\)00122-9](http://dx.doi.org/10.1016/S0367-326X(03)00122-9).
- Guptha, A., Nagariya A. K., Mishra, A. K., Bansal, P., Kumar, S., Guptha, V., & A.K.Singh (2010).Ethnopotential of medicinal herbs in skin diseases: An overview journal of *Pharmacy research*. 3(3) :435-441.
- Hanazaki, N., TamashiroJ.Y., Leitao-Filho H.F. &Begossi A. (2000). Diversity of plant uses in two Caicara communities from the Atlantic Forest coast, Brazil. *Biodiv. Cons.*, 9(5): 597-615.
- Heywood, V. (1999). Trends in agricultural biodiversity. In: *Perspectives on new crops*

and new uses. (eds. A. Janick and A. Alexandria). VA: ASHS Press 2-14.

Heywood, V. and Skoula, M. (1999). The MEDUSA Network: Conservation and sustainable use of wild plants of the Mediterranean Region. In: Perspectives on new crops and new uses. (eds. Janick, A. and Alexandria, A).VA: ASHS Press, 148-151.

Jain, D. L., Baheti, A. M., Jain, S. R., &Khandelwal, K. R. (2010). Use of medicinal plants among tribes in Satpuda region of Dhule and Jalgaon districts of Maharashtra an ethnobotanical survey.

Kaur, A., (2011). Studied on nutritional aspects of unconventional food consumed by gond and korku tribes inhabiting in Vidarbha. Ph. D. thesis, Department of Botany, RTMNU, Nagpur.

Kulkarni D. K.(2006). Role of ethno-botany in Modern Agriculture. In Proceeding of National Conference on Bridging Gap between Ancient and Modern Technologies to Increase Agricultural Productivity, edited by Chudhary SL, Saxena RC and Nene YL (Pub. Central Arid Zone Research Institute) Jodhpur, Rajasthan, India 104-115.

Kulkarni D. K., Agte V. V. &Kumbhojkar M. S.(2003). Leafy vegetables consumed by Mahadeokoli tribe in Western Maharashtra with their nutritional potential. Ethnobotany 15 34-38.

Ladio, A. H. &Lozada M. (2001). Non-timber forest product use in two human populations from

Northwestern Patagonia: A quantitative approach. Hum. Ecol., 29(4): 367-380.

Ladio, A.H.&Lozada M. (2000a). Edible wild plant use in a Mapuche community of Northwestern Patagonia. Hum. Ecol., 28(1): 53-71.

Ladio, A. H. &Lozada M. (2000b). Comparison of wild edible plant diversity and foraging strategies in two aboriginal communities of Northwestern Patagonia. Biodiv. Cons., 12(5): 937-951.

Ladio, A. H. &LozadaM. (2000c). Patterns of use and knowledge of wild edible plants in district ecological environments: a case study of a Mapuche community from northwestern Patagonia. Biodiv. Cons., 13(6): 1153-1173.

Ladio, A. H. and Lozada M.(2004). Summer Cattle Transhumance and wild edible plant gathering in a Mapuche community of Northwestern Patagonia. Hum. Ecol., 32(2): 225-240.

Martin, G. (1995). Ethnobotany: a methods manual, Chapman y Hall. NowyJork.

Nilegaonkar S., Vartak V. D., &Chitre R. G. (1985). Nutritional evaluation of some wild food plants from Pune and neighbouring districts, Maharashtra state-part-I. Journal of Economic and Taxonomic Botany 6(3) 629-635.

Ogle, B.M. &Grivetti, L.E. (1985). Legacy of the chameleon edible plants in the Kingdom of Swaziland, South Africa.A cultural,

- ecological, nutritional study. Parts II-IV, species availability and dietary use, analysis by ecological zone. *Ecology of Food and Nutrition* 17:1-30.
- Pretty, J. N., Guijt, I., Thompson, J., & Scoones, I. (1995). Participatory learning and action: a trainer's guide.
- Price, K.R., Johnson, I.T., & Fenwick, G.R (1987). The chemistry and biological significance of saponins in foods and feed stuffs. *CRC Critical Reviews Food Sci. Nut.*, 26: 27-135.
- Pushpangadan P., Rajsekaran S., Rtheshkumar P. K., Jawahar C. R., Velayudhan Nair V., Lakshmi N. & Saradaamma L. (1988). *Agogyappacha* (*Trichopus zeylanicus* Gaertn) The ginseng of Kani tribes of Agasthyar Hills (Kerala) for ever green health and vitality. *Ancient Science of Life* 8(1) 13-16.
- Scherrer, A.M., Motti, R., Weckerle, C.S. (2005) Traditional plant use in the areas of Monte Vesole and Ascea, Cilento National Park (Campania, Southern Italy). *J. Ethnopharmacol.* 97:129-143.
- Sharma, B. D., Karthikeyan, S. & Singh, N. P. (1996). Flora of Maharashtra State, Monocotyledones. Botanical Survey of India, Calcutta.
- Singh, N. P. and Karthikeyan S. (2000). Flora of Maharashtra State, Dicotyledones Vol. 1. Botanical Survey of India, Calcutta.
- Singh, N. P., Lakshminarasimhan P., Karthikeyan, S. and Prasanna, P. V. 2001. Flora of Maharashtra State, Dicotyledones Vol. 2. Botanical Survey of India, Calcutta.
- Tayade. S.K and D. A. Patil (2006). Ethnomedicinal wisdom of Tribal of Nandubhan District Maharashtra. *Natural Product Radiance.* 5(1):64 -69.
- Tiwari, D. D. & J. Y. Campbell (1997). 'Economics of non-timber forest products', in J.M. Kerr, D.K. Marothia, S.K. Singh, C. Ramaswamy, and W.B. Bentley (eds.) *Natural Resource Economics – Theory and Application*, New Delhi and Oxford: IBH.
- Vartak, V.D. & Suryanarayana, M.C. (1995). Enumeration of wild edible plants from Susala Island, Mulshi reservoir, Pune district. *J. Econ. Taxo. Bot.*, 19(3), 555-569.
- Zode R., & Chaturvedi A. (2016). Role of NTFPs among Forest Villagers in a Nagbhir Tehsil, District Chandrapur (MS), India, *Int. J. of Life Sciences*, A6: 161-164.
- Zode R., Shambharkar, R., & Chaturvedi A., (2015) Current Status Of Non-Timber Forest Products And Its Use Pattern By Villagers Of Tirora Tehsil Of Gondia District Maharashtra, India. *International Journal of Institutional Pharmacy and Life Sciences* 5(5).
- Zode R., Tagade W., & Chaturvedi A., (2014) Biodiversity of NTFPs and its usages from Tirora Tehsil of Gondia District (MS), India, *Int. J. of Life Sciences, Special Issue*, A2:150-152.



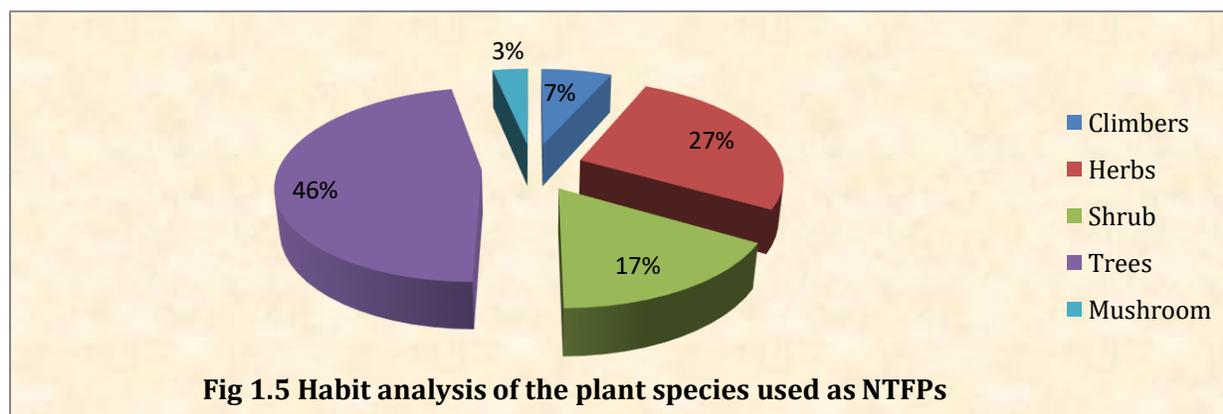
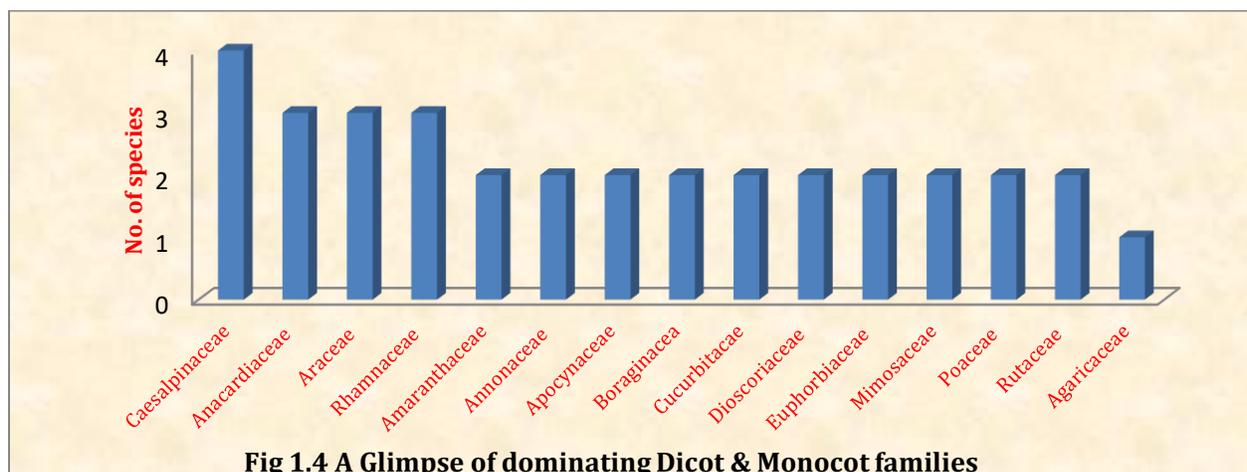
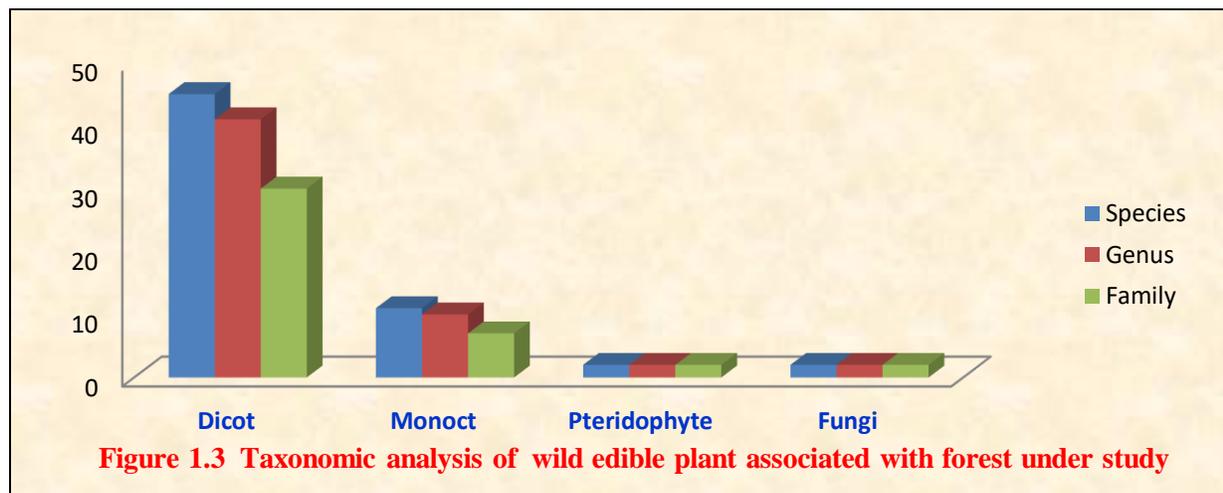
Fig. 1.1: Map showing Maharashtra state in India



Fig. 1.2: Map showing Gondia district.

Table 1:1 Taxonomic analysis of Angiosperm (Dicots & Monocots), Pteridophyte & Fungi concerned with the indigenous traditional knowledge about NTFPs

Taxa	Total	Dicot	Monocot	Pteridophyte	Fungi	Ratio (Dicot: Monocot)
Species	60	45	11	2	2	4.09
Genus	55	41	10	2	2	4.1
Family	41	30	7	2	2	4.2



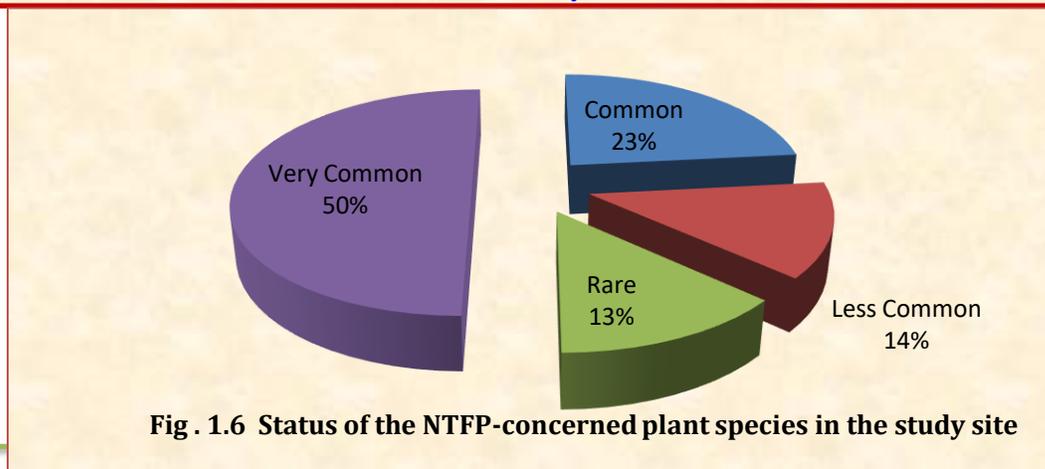
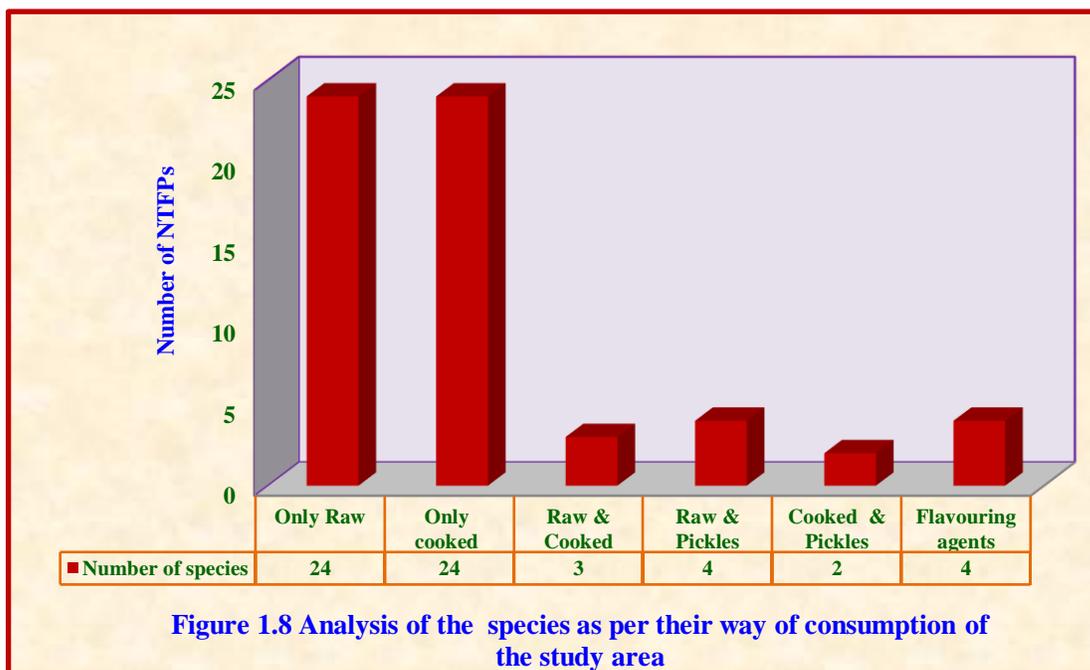
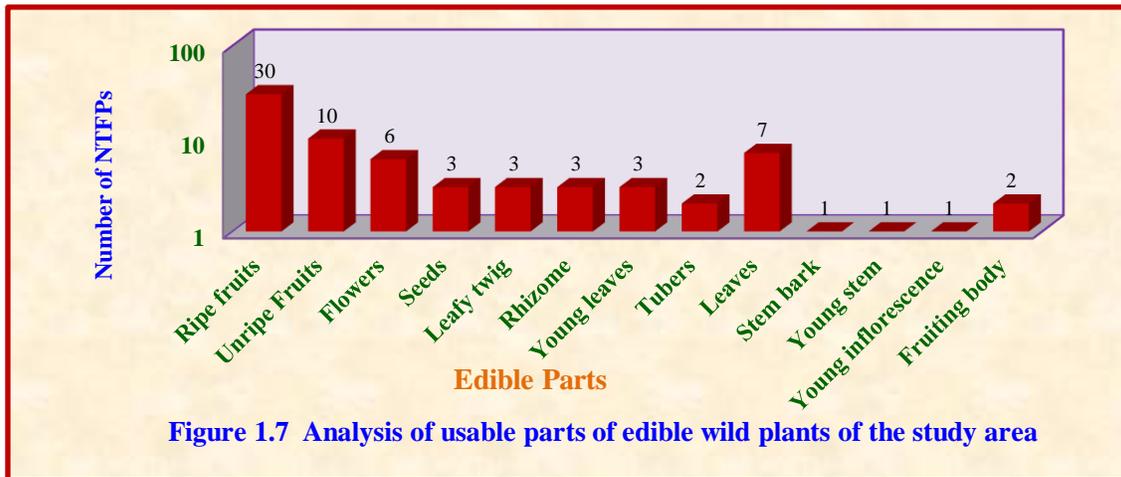


Table 1.2: An analysis of the number of parts used per species and their threat perception

Plant parts	Number of plant species	Threat perception
Ripe fruit	30	High
Unripe fruit	10	High
Flower	6	High
Seeds	3	High
Leafy twig	3	Low
Rhizome	3	High
Young leaves	3	Low
Tubers	2	High
Leaves	7	Low
stem bark	1	High
Young stem	1	Low
Young inflorescence	1	Low
Fruiting body	2	High

Table 1.3: An account of Edible wild plants documented from forest dwellers settled in study area.

Sr. No.	Plant species	Family	Habit	Status	Local name	Edible parts	Way of Consumption/ Dish prepared
1	<i>Acacia catechu</i>	Mimosaceae	Trees	C	Khair	Stem bark	Stem bark used as dye .it is also Katha, one of the ingredients of Pan. This is used as chewing purpose. (Flavouring agents).
2	<i>Achyranthesa spera</i>	Amaranthaceae	Herbs	VC	Kutri, Chilati	Seeds	Dry seeds are Eaten as raw.
3	<i>Aegle marmelos</i>	Rutaceae	Trees	C	Bel	Ripe Fruits	Ripe fruits are eaten as raw.
4	<i>Agaricus sp.</i>	Agaricaceae		C	Yerusatya	Fruiting body	Fruiting bodies are eaten as vegetables (Cooked).
5	<i>Alangiumsalvi folium</i>	Alangiaceae	Trees	VC	Akawal	Ripe Fruits	Ripe fruits are eaten as vegetables (Cooked).
6	<i>Aloe vera</i>	Liliaceae	Herbs	VC	Korphad	Leafy twig	Leaf twig are eaten as raw.
7	<i>Alternanthera</i>	Amaranthaceae	Herbs	VC	Galigho	Leafy	Leafy shoots are eaten as vegetables

	<i>sessile</i>	ae			sh	twig	(Cooked).
8	<i>Amorphophall uscampanulat us</i>	Araceae	Herbs	VC	Suran	Rhizome	Rhizomes are eaten as a vegetable (Cooked).
9	<i>Annona reticulata</i>	Annonaceae	Trees	LC	Ramfal	Ripe Fruits	Ripe fruits are eaten as raw.
10	<i>Annona squamosa</i>	Annonaceae	Trees	VC	Sitapha l	Ripe Fruits	Ripe fruits are eaten as raw.
11	<i>Azadirachtain dica</i>	Meliaceae	Trees	C	Kaduni mb	Ripe Fruits, Young leaves	Frequently ripe fruits are eaten as raw.
12	<i>Bauhinia purpurea</i>	Caesalpiniace ae	Trees	C	Kancha nvrush	Flowers, Ripe Fruits	Flowers are eaten as vegetables in the form of "Bhaje" (Cooked) & Fruits are eaten as vegetables (Cooked).
13	<i>Boerhaviarepe ns var. diffusa</i>	Nyctaginacea e	Herbs	LC	Khapar kuti	Leaves	Leaves are eaten as Vegetables - <i>KhaparkhutichiBhaji</i> (Cooked).
14	<i>Buchananiaco chinchinensis</i>	Anacardiacea e	Trees	VC	Charoli	Ripe Fruits, Seeds	Ripe fruits are eaten as raw.
15	<i>Careyaarbore a</i>	Lecythidacea e	Trees	LC	Kumbh i	Ripe fruit	Ripe fruits are eaten as raw.
16	<i>Carissa carandus</i>	Apocynaceae	Shrubs	C	Karvan da	Unripe Fruits	Unripe fruits are eaten as raw and also used in the preparation of pickles.
17	<i>Cassia fistula</i>	Caesalpinace ae	Trees	C	Bahaw a	Flowers / Petals	Flowers are eaten as vegetables (Cooked).
18	<i>Cassia tora</i>	Caesalpinace ae	Herbs	VC	Tarota	Young leaves	Young leaves are eaten as vegetables (Cooked).
19	<i>Cocciniagrand is</i>	Cucurbitaceae	Climber s	VC	Jungali kundru	Unripe fruits	Unripe Fruits are eaten as vegetables (Cooked).
20	<i>Colocasiaescu lenta</i>	Araceae	Herbs	LC	Dhopa, Chamk ura	Leaves	Leaves are eaten as Vegetable (Cooked) i. e. Called as Pan wadi

21	<i>Commelinabenghalensis</i>	Commelinaceae	Herbs	VC	Kena	Leafy twig	Young plant eaten as Vegetable (Cooked).
22	<i>Cordia dichotoma</i>	Boraginaceae	Trees	C	Shelwa t, Bhokar	Ripe & Unripe Fruits	Unripe Fruits are eaten as vegetables (Cooked) and also used in the preparation of pickles. Ripe fruits are eaten as raw.
23	<i>Cordia gharaf</i>	Boraginaceae	Trees	C	Shelwa t, Gonda ni	Ripe & Unripe Fruits	Unripe Fruits are eaten as vegetables (Cooked). Ripe fruits are eaten as raw.
24	<i>Curcuma longa</i>	Zingiberaceae	Herbs	LC	Halad	Rhizome	Rhizome is taken as edible wild when it fresh and Powder of rhizome used as spice (Cooked) & flavouring agent.
25	<i>Cymbopogonardus</i>	Poaceae	Herbs	C	Gawati chaha	Leaves	Whole plants used as flavouring agent during making Tea (Cooked).
26	<i>Dendrocalamus strictus</i>	Poaceae	Shrubs	VC	Bambo o	Young stem	Base of stem (Young stem bud) are eaten as a vegetables (Vaste), Pakoda (Cooked).
27	<i>Dioscoreaalata</i>	Dioscoriaceae	Climbers	R	Matalu	Tubers	Tubers are eaten as a vegetables (Cooked).Tuberous root are used to prepare the stir-fried chips and are eaten during religious fasting.
28	<i>Dioscorea bulbifera</i>	Dioscoriaceae	Climbers	R	Matalu	Tubers	Tubers are eaten as a vegetable (Cooked).
29	<i>Diospyrosmelanoxylon</i>	Ebenaceae	Trees	VC	Tendupatta	Ripe fruits	Ripe fruits are eaten as raw.
30	<i>Embilca officinalis</i>	Euphorbiaceae	Trees	VC	Awala	Ripe & Unripe Fruits	Unripe fruits are eaten as raw and also used in the preparation of pickles.
31	<i>Ficusracemosa</i>	Moraceae	Trees	VC	Umber	Ripe fruits	Ripe fruits are eaten as raw.
32	<i>Grewiaasiatica</i>	Tiliaceae	Shrubs	R	Phaals a	Ripe fruits	Ripe fruits are eaten as raw.

33	<i>Holarrhenapu bescens</i>	Apocynaceae	Trees	VC	Pandha rakuda	Flowers, Unripe fruits	Flowers are eaten as vegetables (Cooked).
34	<i>Lantana camera</i>	Verbenaceae	Shrubs	VC	Ghaneri	Ripe fruits	Ripe fruits are eaten as raw.
35	<i>Limoniaacidis sima</i>	Rutaceae	Trees	R	Kawath	Ripe fruits	Ripe fruits are eaten as raw and used to make the chatney (Pickles).
36	<i>Lygodiumflexuosum</i>	Polypodiaceae	Herbs	C	Jatashankar	Leaves	Young leaves are fried with oil and used as vegetable (Cooked).
37	<i>Madhucalongi folia</i>	Sapotaceae	Trees	VC	Mahua	Ripe Fruits, Flower	Ripe fruits are eaten as raw.
38	<i>Mallotusphilipensis</i>	Euphorbiaceae	Trees	C	Shendi	Ripe fruits	Ripe Fruits are eaten as raw.
39	<i>Mangiferaindica</i>	Anacardiaceae	Trees	VC	Aam	Ripe & Unripe Fruits	Unripe fruits are eaten as raw and also used in the preparation of pickles.
40	<i>Marsileaquadrifolia</i>	Marsileaceae	Herbs	R	Marsilea sp.	Leaves	Leaves are eaten as Vegetables (Cooked).
41	<i>Maytenussenegalensis</i>	Celastraceae	Shrubs	VC	Bharati	Young inflorescences	Young inflorescences are eaten as vegetables (Cooked).
42	<i>Momordicadioca</i>	Cucurbitaceae	Climbers	LC	Katwel	Unripe fruits	Unripe Fruits are eaten as vegetables (Cooked).
43	<i>Moringaoleifera</i>	Moringaceae	Trees	VC	Shevaga	Unripe fruits	Unripe Fruits are eaten as vegetables (Cooked).
44	<i>Musa paradisiaca</i>	Musaceae	Shrub	C	Kela	Ripe fruits	Ripe fruits are eaten as raw.
45	<i>Nymphaea pubescens</i>	Nymphaeaceae	Herbs	VC	Kamal	Ripe Fruits, Flower, Rhizome	Ripe fruits and Flowers are eaten as raw and Rhizome is eaten as vegetables (Cooked).
46	<i>Ocimumtenuiflorum</i>	Lamiaceae	Herbs	VC	Tulas	Leaves	Young leaves are as a raw. Fresh leaves are used to make a Tea for of good flavour (Cooked)
47	<i>Olaxpsittacorum</i>	Olacaceae	Shrubs	VC	Hartfari	Young leaves	Young leaves are eaten as vegetables (Cooked).

48	<i>Oroxylum indicum</i>	Bignoniaceae	Trees	R	Tetu	Flower & Unripe fruit	Flowers are eaten as vegetables (Cooked) and Unripe fruits are used in the preparation of pickles.
49	<i>Phoenix sylvestris</i>	Palmae	Trees	VC	Sindi	Ripe fruits	Ripe fruits are eaten as raw (Shindoli).
50	<i>Pithecellobium dulce</i>	Mimosaceae	Trees	VC	Chichbili	Ripe fruits	Ripe fruits are eaten as raw.
51	<i>Semecarpus nacardium</i>	Anacardiaceae	Trees	VC	Bhelau, Bibba	Ripe fruits	Young cups (Receptacle) are used eaten as vegetables (Cooked). Ripe yellow fleshy cups (Receptacle) commonly used eaten as raw.
52	<i>Syzygium cumini</i>	Myrtaceae	Trees	VC	Jambhul	Ripe fruits	Ripe fruits are eaten as raw.
53	<i>Tamarindus indica</i>	Caesalpiniaceae	Trees	LC	Chinch	Ripe & Unripe Fruits	Ripe and unripe fruits are eaten as raw.
54	<i>Terminalia bellerica</i>	Combretaceae	Trees	C	Behada	Seeds	Ripe and unripe fruits are eaten as raw.
55	<i>Termitomyces</i> sp.	Trichlomataceae		R	Bhombodi	Fruting body	Fruting bodies are eaten as vegetables (Cooked).
56	<i>Theriophonum indicum</i>	Araceae	Herbs	VC	Undirkani	Leaves	Leaves are eaten as Vegetables (Cooked).
57	<i>Trapanatans</i>	Trapaceae	Herbs	LC	Shingada	Ripe fruits	Fruits are eaten as raw (Cooked), Young fruits are crushed with water and make Khir (Juice).
58	<i>Ziziphus caracutta</i>	Rhamnaceae	Shrubs	R	Katbor	Ripe fruits	Ripe fruits are eaten as raw.
59	<i>Ziziphus mauritiana</i>	Rhamnaceae	Shrubs	VC	Ber	Ripe fruits	Ripe fruits are eaten as raw. Dry fruits boiled with water and sugar and eaten as <i>Borkutkatli</i> (Cooked).
60	<i>Ziziphus oenoplea</i>	Rhamnaceae	Shrubs	VC	Aeroni	Ripe fruits	Ripe fruits are eaten as raw.