

Unconventional Food Plants as Conventional Food Plants.

Dr. Smita Deepak Shinde
Kthm college Nashik

Abstract— UFP i.e.: Unconventional Food Plants are acquiring the place in the diet or meal of the people. These plants are now considered as superfood as they are highly nutritious. Some plants leave, roots, or whole plant is consumed and they have remarkable place in the market too (3). These plants can be easily found and also can be cultivated to meet the demand. These plants can be good cash crops for the farmers in India. Some plants are endemic to the place but can be increase their number by cultivating as regular crop. Plants like *Amaranthus viridis* L. *Cassia tora* L. *Colocasia esculenta*, *Ipomoea aquatica* Forsk, *Ipomoea aquatica* Forsk, *Tamarindus indica* L., *Xanthium strumarium*, *Bauhinia purpurea* L., *Acacia nilotica* ssp. *Indica* (Bth.) Brenan, *Carissa congesta* Wt. *Lantana camara* L., *Cucurbita maxima* Duch. Ex Lam., *Terminalia arjuna* (Roxb.) W. and *A. Asparagus racemosus* Willd. are the few examples of cosmopolitan plants. In present day only few plants are considered as UFP and consumed by the people but there are more plants that have to be explored. These plants are oftenly consumed and used for various purposes in the tribal region. These plant data have to be documented and should be preserved for the further studies.

I. INTRODUCTION

India rank first as the most populous country in the world. It will be quite tedious job to fulfill the food demand of the people. In today's condition where the world is facing the problem of inflation, pollution, it will be difficult to meet the demand of the people. People are restricted to the certain diet in the area of rich plant diversity. To overcome this entire problem UFP can be the better option and now the people is more concentrated to the herbs and are more in favor of consuming it. It is estimated that there are around 27 thousand plant species with food potential in the world [2]. How many of these plants are used for this purpose is a very complex question. Prescott-Allen and Prescott-Allen estimated that 103 plant species are responsible for 90% of the world food supply [2]. Local studies about UFP are important for

documenting species with traditional use value, and for stimulating cultural use and conservation, especially in communities facing socioeconomic transformations due to close proximity to urban centers.

II. STUDY AREA

Nashik district has an area of 15,582 sq. km². It is one of the largest districts of Maharashtra State. Nashik district is situated in the upper Godavari basin. The forest of Nashik District is dry deciduous, scrub, and flora is highly diversified in vegetation and has a rich number of floristic components due to its topography. Nashik district shares its boundary with Dhule district to the north, Jalgaon district (east), Aurangabad district (southeast), Ahmadnagar (south), Thane district (southwest), Valsad and Navsari districts of Gujarat (west), Singh & Khade (2012-13, 2021-22). The Western Ghats (Sahyadri range) stretches from north to south across the district's western portion. Few villages are hilly and intersected by ravines. In Nashik district, Bhil, Katkari, Mahadeo Koli, Kokana, Adivasi are the tribal communities. Especially Mahadeo Koli and Kokana are the largest community amongst all. Tribals are considered the main citizen of the area. They live in 'Padas' and follow their old traditions. They still believe and trust the plant for treating their illness. Tribals have immense Knowledge of the plants and the forest. Their main occupation is agriculture. But due to changes in the climatic condition, removal of forest cover, encroachment on land and water, dams, irrigation, which has made them find subsidiary work for their livelihood. So, the tribals have started moving to the urban area. The fieldwork is based on collections and photographs from systematic planning and meticulously exploring the area for gathering various information related to the medicinal uses of plants, distribution, and data related to the computer analysis database. Extensive and intensive exploration every

Saturday and Sunday and on other holidays was carried out. All the information collected during outings has been recorded in the field book. Exploration in the remote forest area of the Surgana, Trimbakeshwar, and Igatpuri was carried out by trekking. Tribals are using different plants and plant parts as food when there is scarcity of food. From the month of June to Sept. there is scarcity food. In such

condition they use to eat various parts of plants such as root, rhizome, leaves, fruits or whole plant. Near about 63 taxa are used as unconventional food plants by these tribals. Some are very good. These may be used in future as normal cultivating plants. Following is the list of plants which is based on the parts which are used as food.

A) The Leaves of the Plants Used as Food:	B) Flowers, Fruits and Seeds used as Food:	C) Rhizomes, Roots (Root Tubers) Used as Food:
<p>Alternanthera sessilis (L.) DC. Amaranthus spinosus L. Amaranthus tricolor L. Amaranthus viridis L. Bauhinia purpurea L. Bauhinia tomentosa L. Caesulia axillaris Roxb. Cassia tora L. Celosia argentea L. Colocasia esculenta (L.) Schott. And Endl. Commelina forskaoalii Vahl Corchorus trilocularis L. Cissampelos pareira var. hirsuta (Buch. –Ham ex DC.) Forman Chlorophytum borivilianum Sant. & Fernand. Chenopodium murale L. Diplocyclos palmatus (L.) C. Jeffrey Dolichos trilobus L. Digeria muricata (L.) Mart. Glinus lotoides L. Hibiscus cannabinus L. Hibiscus sabdariffa L. Ipomoea aquatica Forsk Ipomoea hederifolia L. Ipomoea turbinata Lag. Martynia annua L. Meyna laxiflora Robyn. Polycarpon prostratum (Forsk.) Aschers. Piliostigma malabaricum (Roxb.) Bth. Portulaca oleracea L. Rivea hypocrateriformis choisy Schrebera swietenoides Roxb. Sphearanthus indicus L. Spondias pinnata (L. f.) Kurz. Tamarindus indica L. Vernonia anthelmintica (L.) Willd. Xanthium strumarium L.</p>	<p>Abelmoschus esculentus (L.) Moench. Acacia nilotica ssp. Indica (Bth.) Brenan Alangium salvifolium (L.f.) Wang. Bauhinia purpurea L. Bridelia retusa (L.) Spreng. Buchanania lanzan Spreng. Capparis decidua (Forsk.) Edgew. Capparis zeylanica L. Carissa congesta Wt. Careya arborea Roxb. Ceropogia bulbosa Roxb. Cleidion spiciflorum (Burm.f) Mers. Citrullus lanatus (Thunb.) Matsumara & Nakai Cordia dichotoma Forst. f. Cordia wallichii G. Don. Cordia gharaf (Forsk.) Ehrenb. & Asch. Coccinia grandis (L.) Voigty. Crotalaria medicaginea Lam. Cucumis setosus Cogn. Cucurbita maxima Duch. Ex Lam. Diospyros melanoxylon Roxb. Dendrophthoe falcata (L.f.) Etting. var. Emblica officinalis Gaertn. Garuga pinnata Roxb. Grewia subinequalis DC. Grewia tenax (Forsk.) Fiori Grewia tiliaefolia Vahl Grewia villosa Willd. Hibiscus cannabinus L. Hibiscus ovalifolius (Forsk.) Vahl Holostemma ada-kodien Schultes Indigofera cordifolia Heyne ex Roth Indigofera glandulos Roxb. Indigofera trifoliata L. Kiraganelia reticulata (Poir.) Baill. Lagenaria siceraria (Molina) Standl. Lantana camara L. Leea macrophylla Roxb. Maytenus emarginata (Willd.) D. Hou. Madhuca longifolia (Koen.) Mac Bride Moringa oleifera Lam.</p>	<p>Amorphophallus commutatus (Schott.) Engler Asparagus racemosus Willd. Chlorophytum tuberosum (Roxb.) Baker Colocasia esculenta (L.) Schott. and Endl. Dioscorea alata L. Dioscorea belophylla (Prain) Haines Dioscorea hispida Dennst. Dioscorea pentaphylla L. Dioscorea wallichii Hook. f. Hemidesmus indicus (L.) Lamk. Pueraria tuberosa (Roxb.) DC. Sterculia urens Roxb.</p>

Zaleya govindia (Buch. –Ham.) Nair.	Moringa concanensis Nimmo ex Dalz. and Gibs. Morinda pubescens J. E. Sm. Mucuna pruriens (L.) DC. Momordica dioica Roxb. Mukia maderaspatana (L.) M. Roem. Nicandra physalodes (L.) Gaerten Ptilostigma malabaricum (Roxb.) Bth. Physalis minima L. Phoenix sylvestris (L.) Roxb. Prosopis cineraria (L.) Druce Rhus mysurensis Heyne ex W. and A. Sesbania sesban (L.) Merr.	
--	---	--

III. RESULT:

Plant Family	Number Of Plant
Amaranthaceae	7
Fabaceae	11
Asteraceae	4
Commelinaceae	1
Malvaceae	9
Menispermaceae	1
Asparagaceae	1
Cucurbitaceae	5
Convolvulaceae	4
Martynaceae	1
Rubiaceae	1
Portulacaceae	1
Oleaceae	1
Aizoaceae	1
Boraginaceae	3
Alanginaceae	1
Euphorbiaceae	1
Anacardiaceae	1
Ebenaceae	1
Loranthaceae	1
Phyllanthaceae	1
Asclepediaceae	1
Leguminosae	3
Verbenaceae	1
Vitaceae	1
Sapotaceae	1
Moringaceae	3
Molluginaceae	1
Caryophyllaceae	1

Fig.no.1. List of plant families with the plant frequency

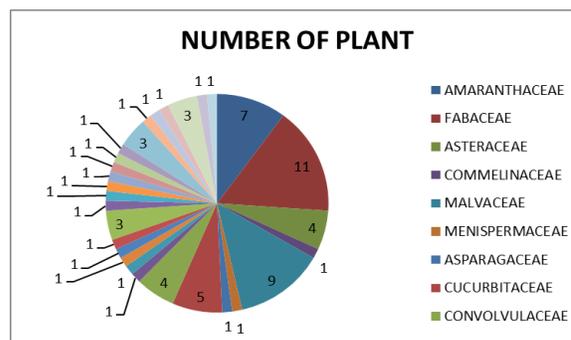


Fig. no. 2 Dominant family

In present day the use of these plants as food is very less but there is some substantial development too. This data should be well documented and these plants phytochemical study should be carried. Basically, the present study focuses on the documentation of the traditional knowledge of these valuable plants, which could enhance the potential of these medicinal plants to other communities as well and by understanding the importance, other communities can also be helpful for conservation of these resources for further use. Bioactive compounds are present in the plants and they have to study for the future use which can benefit humans. They may have some antioxidant properties too, which has to be explored and documented.

REFERENCES

[1] 1.Knowledge, use, and disuse of unconventional food plants:Mayana Lacerda Leal, Rubana Palhares Alves & Natalia Hanazaki .Journal of Ethnobiology and Ethnomedicine volume 14, Article number: 6 (2018).

- [2] Edible Plants. In: Levins, editor. . Rapaport EH, Drausal BS, Encyclopedia of biodiversity New York; Academic Press; 2001. P375-382.
- [3] How many plants feed Knowledge, use and disuse of Unconventional food plants. Mayana Lacerda Leal, Rubaena Palhares Alves and Natalia Hanzaki Prescott-Allen R. Journal of Ethnobotany and Ethnomedicine 14;6(2018).
- [4] Potential Bioactive Compounds of Unconventional Food Plants. Agri Res& Tech: Deborah Murowaniecki Otero, Camila Duarte Ferreira-Ribeiro. Open Access J. 2019; 23(2): 556225.
- [5] Potential Bioactive Compounds of Unconventional Food Plants Deborah Murowaniecki Otero and Camila Duarte Ferreira-Ribeiro. Department of Food Science, Federal University of Bahia, Brazil Submission: October 08, 2019; Published: October 23, 2019.
- [6] Unconventional Food Plants as an Alternative in Starch Production. José Francisco dos Santos Silveira Junior¹ and Alicia de Francisco². Department of Food Science and Technology, Federal University of Santa Catarina, Florianópolis, SC, Brazil.
- [7] Nutritional aspects of non-conventional edible plants from Brazil: Caruru (*Amaranthus spinosus* L) and trapoeraba (*Commelina benghalensis*). panel Lucélia Vieira Pereira ^a, Maiara Rodrigues Salvador ^b, Beatriz Souza Silva ^c, Helena Maria Pinheiro-Sant'Ana ^d, Ceres Mattos Della Lucia ^d, Reinaldo Duque Brasil Landulfo Teixeira ^e, Leandro de Morais Cardoso. Food Research International, Vol.166 April 2023, 112583.