

FRUITS FROM THE WOODS: AN EXPLORATION OF SOME WILD EDIBLE FRUITS OF BASTAR REGION OF CHHATTISGARH

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Abstract: The present investigation was carried out to explore and identify the wild edible fruits to create awareness to understand the contribution of selected wild underutilized fruits in the region at various places in study area of Bastar region. Though Wild edible fruits like *Diospyros melanoxylon* (Ebony), *Syzygium cumini* (Jamun), *Tamarindus indicus* (Imli), *Emblica officinalis* (Amla), *Buchanania lanzan* (Chirongi), *Annona squamosa* (Custard apple), *Ziziphus mauntiana* (*Ber*) etc are neither large nor fleshy and contain lots of seeds, They are highly perishable and difficult to store in the fresh form also high acidity and/or strong astringent taste and often available only in the local markets and are rarely known in other parts of the country. Fruits of these wild species are cheap and highly nutritious. These wild food resources have the potential to uplift the economic condition of the local people and add forgotten flavor and nutrition in the food basket again and may offer a sustainable source of income and employment for the local people and tribal.

Introduction:

Broadly, the botanical term *fruit* refers to the mature ovary of a plant, including its seeds, covering and any closely connected tissue, without any consideration of whether these are edible. Fruit is one of the major dietary sources of various antioxidant phytochemicals for humans. Our daily diet plays a key role in healthy aging and preventing chronic disease including obesity, diabetes, cardiovascular diseases, cancer, and osteoporosis (Heber, 2009). Fruits are an integral part of human diet and nutrition, as they are rich sources of fibre, vitamins, water, minerals, including folate, potassium and vitamins A and C and phytochemicals. Forests have been meeting our demands for fuel, fodder, food, fibre, timber and medicines. Foods from forests and trees outside forests – such as leaves, seeds, nuts, honey, fruits, mushrooms, insects and wild animals – have been important parts of rural diets for thousands of years. Forests, trees and agroforestry systems may contribute to food security and nutrition in many ways, they provide better and more nutritionally-balanced diets, greater control over food inputs—particularly during lean seasons and periods of vulnerability but such contributions are usually poorly addressed by the policy makers and remain largely under-researched and less understood.

The wild edible fruits occurring in different forest tracts of the Indian subcontinent botanically come from wide range of plant families. In all, about 600 kinds are known, of which about 100 are more agreeable types. The forests are abundant with seasonal juicy succulent fruits like *Diospyros melanoxylon* (Ebony), *Syzygium cumini* (Jamun), *Tamarindus indicus* (Imli), *Emblica officinalis* (Amla), *Buchanania lanzan* (Chirongi), *Annona squamosa* (Custard apple), *Ziziphus mauntiana* (*Ber*) etc wild fruits are undoubtedly man's oldest food and must have always been a source of pleasure for him because of their flavor and taste and importantly power packed source of both digestible and indigestible carbohydrates and also they are good source of minerals and vitamins. The role played by *forests* and trees in the lives of many people appears obvious through the many uses made of tree products, including foods, medicines, fodder, fibres and fuels, and for construction, fencing and furniture (FAO, 2010).

As these wild fruit trees are not commonly cultivated on the farm and there is scant and dispersed knowledge about the fruits and their nutritive value. Usually people prefer to have fruits with good taste since wild fruits have high levels of the unpleasant tasting tannins and glycosides. Wild fruits are neither large nor fleshy and contain lots of seeds. The fruits are highly perishable and difficult to store in the fresh form. Most wild fruits are not really easy and handy to eat. Some fruit species are not acceptable as fresh fruit because of high acidity and/or strong astringent taste. They are often available only in the local markets and are rarely known in other parts of the country. On the contrary, benefits of such underutilized fruits far exceed their limitations. They are cheap and highly nutritious. They have known medicinal and therapeutic properties and are used by the local people to cure various diseases. The present investigation was carried out to explore and identify these wild fruits to create awareness to understand the contribution of forests and trees to a food secure and nutrition-sensitive future.

Materials and Methods

The study was undertaken during 2015-2018 in different seasons by conducting field survey in different forest areas, within the districts of Bastar region. To get the first hand information, consultation with people was made about the present status, production

and marketing of selected wild underutilized fruits in the region at various places. Questionnaires were filled for the collection of data such as local name, time of availability, taste and their mode of uses. The wild fruit plants were identified with the help of local people and referring relevant scientific literatures.

Observation and Discussion

About Thirty five underutilized or wild edible fruits selected from the study area on the basis of availability and wide usage. The wild fruits of the present study areas are arranged alphabetically with their Local name, scientific names, family, time of availability, taste and uses as food are shown in **Table I**

Out of which 7 species belongs to shrubs, 25 belong to trees, 2 belong to small trees and 1 belong to climbers. These are categorized in to ripe edible fruits are eaten fresh, dried, roasted and pickled. Majority of the fruits are eaten raw when ripe. It is the pulp or the fleshy palatable pericarp of which are sweet, sour, tangy and astringent in taste that is generally consumed e.g. *Aegle marmelos* Fruits of *Annona reticulata* *Annona squamosa* and *Emblica officinalis* are used ripe, *Cordia dichotoma* fruits are used both ripe and unripe conditions. Unripe fruits used as vegetables or in pickles are *Cordia dichotoma* and *Artocarpus lakoocha*, where as *Bauhinia vahlii* is used roasted, *Aegle marmelos*, *Buchanania lanzan*, *Ziziphus mauritiana* are used fresh as well as dried and all of these wild edible fruits are very commonly used by the local tribes.

Conclusion

The study contributes identification, systematically compilation and dissemination of information on a selected set of wild edible fruits available in Bastar region. These wild food resources have the potential to uplift the economic condition of the local people and add forgotten flavor and nutrition in the food basket again. However, availability of most of these wild foods are now depleting rapidly due to Population stress, felling of trees for timber and fuel wood, urbanization, modern dietary habits and other anthropogenic impact in the area. A need of future research to analyze the quality and quantity of nutrition and to investigate the role of forest nutrition and to explore the value chain potentials of wild edible fruits will offer a sustainable source of income and employment for the local people and tribal.

References

- Banik,A.(2014) 'Identification and utilization of wild edible plants used by the tribal's of Bastar region (Chhatisgarh)', *Life science leaflets online* 0976–1098
- Dandsena,N. and Banik,A. (2016)Processing and value addition of the underutilized agriculture crops and indigenous fruits of Bastar region of Chhatisgarh',*International Journal of Multidisciplinary Research and Development*,3(3),pp.214-223.
- FAO. 2010a. *Global Forest Resources Assessment 2010. Main report*. FAO Forestry Paper No. 163. Rome. Available at: www.fao.org/docrep/013/i1757e/i1757e.pdf
- Heber (2009) Energy-enhancing antioxidant: Natural Factors Nutritional Products Ltd.:1-2
- Jain,S.K.(1963). Wild Plant-Foods of the Tribals of Bastar (Madhya Pradesh); B.S.I. 30 B, (2):56-80.
- Jain,S.K.(1964).Wild plant-foods of the tribals of Bastar (Madhya Pradesh). *Proceedings of the National Institute of Science, India*, Vol. 30B(2): 56–80.
- Kindo,I. and Britto,J.S.(2016).An Ethnobotanical Study of Some Wild Edible Plants Used By Koraku Tribals of Balrampur District Chhatisgarh India; *International Journal of Pharma and Bio Sciences*; 7(3): 28-33
- Patel,R.K., Singh,A.K., Yadav, D.S., and Des,L.C.(2008). 'Underutilized fruits of North Eastern Region, *India underutilized and underexploited horticulture crops*. (4). New India Publishing Agency, New Delhi (India): 222-235.
- Prachi,P.K., Prabha,Y., Bhogaonkar, P.Y.and Marathe ,V.R.,(2012). 'Underutilized wild fruits of North Maharashtra'.*Journal of Research in Plant Sciences*;1(1): 71-76.
- Shukla,A.K. and Singh,A. (2014) 'Diversity of Forest Tree in the Forest of Sarguja District,Chhatisgarh, India', *International Journal of Science and Research*, 3 (12) ,1152-1157
- Shukla,S.K.and Kumar,S.(2009). '*Underutilized Subtropical Fruits*. Ist edn. Lucknow: International Book Distributing CO.
- Singh,A.K.(2013). 'Probable Agricultural Biodiversity Heritage Sites in India: XV. The Bastar Region', *Asian Agri-History*.17,(1):20;3–24

TABLE- 1

WILD EDIBLE FRUITS OF THE BASTAR REGION

	Botanical name	Family	Local name	Description	Time of availability	Utilization	Taste
1	Aegle marmelos	Rutaceae	Billi	A tree	April - June	Fruit is eaten fresh or dried.	sweet and sour
2	Alangium salvifolium	Cornaceae	Ahkol	A shrub	April - June	Ripe fruits are eaten	pungent
3	Annona reticulata	Annonaceae	Ramphal	A tree	March - May	Ripe fruits are eaten	sweet
4	Annona squamosa	Annonaceae	Sitaphal	A tree	November - April	Ripe fruits are eaten	sweet
5	Anthocephalus cadamba	Rubiaceae	Kadam	A tree	August - November	Ripe fruits are eaten	sweet and sour
6	Antidesma diandrum	Phyllanthaceae	Avali	A shrub	April - June	Ripe fruits are eaten	sour
7	Artocarpus lakoocha	Moraceae	Barhal	A tree	May - October	Ripe fruits are pickled.	tangy sour
8	Averrhoa carambola	Oxalidaceae	Kamra	A tree	March - May	Ripe fruits are eaten	sour
9	Bauhinia vahlii	Caesalpiniaceae	Siadi	A climber	March - May	Roasted fruits are eaten	sweet
10	Borassus flabellifer	Arecaceae	Tadd	A tree	March - June	Ripe fruits are eaten	mild sweet
11	Bridelia montana	Euphorbiaceae	Litijhad	small tree	May - September	Ripe fruits are eaten	sweet
12	Buchanania lanzan	Anacardiaceae	Charpak	A tree	April - May	Fruit is eaten fresh or dried.	sweet
13	Casearia graveolens	Flacourtiaceae	Kirich	A tree	June - July	Ripe fruits are eaten	sweet
14	Cordia dichotoma	Boraginaceae	Bohar	A tree	May - June	Tender & Ripe fruits are eaten	sour
15	Diospyros melanoxylon	Ebenaceae	Tendu, Temru	A tree	May - June	Ripe fruits are eaten	sweet
16	Diospyros peregrine	Ebenaceae	Makadtendu	A tree	March-April	Ripe fruits are eaten	sweet & astringent
17	Elaeocarpus floribundus	Elaeocarpaceae	Banghkri	A tree	May - December	Ripe fruits are pickled.	sour
18	Emblica officinalis	Phyllanthaceae	Aonla, Nilli	A tree	March - June	Ripe fruits are eaten	sour
19	Ficus glomerata	Moraceae	Dumar	A tree	February- June	Ripe fruits are eaten	Astringent
20	Flacourtia indica	Flacourtiaceae	Kakai	small tree	March-June	Ripe fruits are eaten	sour and tangy
21	Gardenia gummifera	Rubiaceae	Kullu,	A shrub	June - August	Ripe fruits are eaten	sour
22	Gmelina arborea	Verbenaceae	Seona,	A tree	March - April	Boiled fruits are eaten	sweet
23	Grewia abutifolia	Tiliaceae	Bhaimsadim	A shrub	May-June	Raw fruits are eaten	sweet
	Botanical name	Family	Local name	Description	Time of availability	Utilization	Taste
24	Grewia hirsuta	Tiliaceae.	Gudsukri	A shrub	August-December	Ripe fruits are eaten	sweet

25	<i>Mangifera indica</i>	Anacardiaceae	Aama	A tree	April - July	Ripe fruits are eaten	sweet & sour
26	<i>Phoenix sylvestris</i>	Arecaceae	Chindd	A tree	May-August	Ripe fruits are eaten	sweet
27	<i>Phyllanthus acidus</i>	Phyllanthaceae	Shree amla	A tree	March-June	Ripe fruits are eaten	Sour
28	<i>Schleichera oleosa</i>	Sapindaceae	Kosamb	A tree	June - July	Ripe fruits are eaten	sour and tangy
29	<i>Semecarpus anacardium</i>	Anacardiaceae	Bhelva	A tree	April- June	Ripe fruits are eaten	sweet & pungent
30	<i>Spondias pinnata</i>	Anacardiaceae	Amdi /Amra	A tree	March-June	Ripe fruits are eaten	sour
31	<i>Syzygium cumini</i>	Myrtaceae	Jam	A tree	June - July	Ripe fruits are eaten	sweet
32	<i>Tamarindus indica</i>	Caesalpiniaceae	Tettar /Imli	A tree	October - April	Ripe fruits are eaten	sour and tangy
33	<i>Ziziphus mauritiana</i>	Rhamanaceae	Ber /Boer	A tree	February - April	Fruits are eaten fresh & dried	sweet & sour
34	<i>Ziziphus nummularia</i>	Rhamanaceae	Jhar beri	A shrub	February - April	Ripe fruits are eaten	sweet & sour
35	<i>Ziziphus oenoplia</i>	Rhamanaceae	Katakuli	A shrub	February - April	Ripe fruits are eaten	sweet & sour

