



FRUITS IN THE WILDERNESS: A POTENTIAL OF LOCAL FOOD RESOURCE DESHMUKH*, B. S. AND VIDYA SHINDE

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ABSTRACT

The present study deals with the documentation and future potential of 29 wild edible fruit plants consumed by tribal communities from Kalsubai-Harishchandragad wild-life Sanctuary fall in Maharashtra state-India. Several plant species have been collected from the study areas which are of high economic food potential. Many plants reported are used in different formulation of 'Ayurveda' in Indian folk-medicine. They provide fibers which prevent constipation. Some examples are, *Cordia dichotoma* Frost.f.Prodr., *Diospyros peregrina* (Gaertn.)Gurke, *Carrisa congesta* Weight., *Grewia abutilifolia* Vent, *Grewia villosa* Willd, *Rhus sinuata* Thunb., *Meyna laxiflora* Robyns, *Securinega leucopyrus* (willd.)Muell., *Elaeagnus conferta* Roxb., *Feronia elephantum* Corr., *Cucumis setosus* Cogn., *Capparis zeylanica* L. etc. Fruits of these species are edible and having nutritious food value which provides us the minerals like Sodium, Potassium, Iron, Calcium, Magnesium, phosphorus etc.

KEY WORDS

Wild fruits, Food potential.

INTRODUCTION

Wild fruits were an important source of food for mankind before the dawn of civilization and the domestication of the present day fruits. Cavemen in the forests also dependent on these fruits and passed on valuable information on the utility and choice of wild species of fruits from generation to generation. These wild fruits have played a very vital role in supplementing the diet of the people. Recently, the use of wild fruits as a food has decreased due to improvement and hybridization in commercially cultivated fruit plants. On the other hand increase in urbanization and gradual exploration of forest and waste land has led to the threat of the extinction of wild species. Few peoples in rural areas still use them extensively as a supplement to their basic food requirement. Some are preserved for use during periods of scarcity. They are some times sold in the urban market. Although, the popularity of these wild forms of fruits has declined. It is consider that special attention should be paid to them in order to maintain and improve this important source of food

supply. Some botanical explorations and publications have emphasized on the diversity and value of wild edible fruits plants (Vartak 1959, Billore 1969, Datar and Vartak 1975, Kumbhojkar and Vartak 1988, Jain 1995, Arora et.al. 1996, Maikhuri et.al. 2000, Natrajan and Paulsen 2000, Sundriyal 2002, Kala 2007, Bhattacharjee 2008, Khyade et.al. 2008, 2009). But the information available on the wild fruit species is rather scanty. Therefore the scientific and systematic knowledge of wild edible fruit will increase the nutritional status of local inhabitants and this will help in horticultural and agricultural field.

The present study deals with the identification, documentation and ethno-botanical exploration with respect to food value of wild edible species consumed by tribal communities from Kalsubai-Harishchandragad wild-life Sanctuary of Ahmednagar district fall in Maharashtra state-India. Forest is of moist deciduous type including some evergreen patches. The tribal population is relatively large and maximum area is occupied by tribal's viz.



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Mahadeo-koli, Thakars, Bhils and Ramoshi's. The forest resource plays important role in life hood of these communities. There is no correct report on wild edible fruits as a local food potential from this area. Hence, the present study was conducted to explore and identify the wild edible plant resources.

MATERIALS AND METHODS

In view of collecting the specimen frequent excursion are made at different localities of the study area. The collected specimens are preserved by preparing herbarium sheets which are identified with the help of standard floras and recently available literature (Cooke 1908, Pradhan and Singh 1999, Singh and Karthikeyan 2000, Singh et.al. 2001, Almeda 2001, Yadav 2002, Bhagat et.al. 2008). The collected fruits are then dried and preserved by following the technique (Jain and Rao 1967). Photographs of some important specimens are taken for further details. Most of the species collected were wild. Information on their use and utility were generated through interaction with age-old persons of tribal and local communities.

OBSERVATIONS AND DISCUSSION

A selective total number of 29 wild fruit plants are collected and stored with detailed

information regarding scientific name, common name, purpose of uses for future reference and study (Table 1). Out of which 3 species belongs to herbs, 11 species belongs to shrub, 12 belong to trees and 3 belong to twiners and climbers. These are categorized in to (i) ripe edible fruits; (ii) unripe fruits used as vegetables; (iii) unripe edible fruits. Majority of the fruits are eaten raw when ripe. It is the sweetish pulp or the fleshy palatable pericarp of the ripe berries or drupes that is generally consumed e.g. *Zyzyphus oenoplia*. Fruits of *Carrisa carandus* and *Emblca officinals* are used both ripe and unripe condition. Unripe fruits used as vegetables or in pickles are *Dillenis indica* Linn. and *Pavetta indica* Linn.

It is found that all the enumerate plant species are very commonly used by the tribles. Some of them are found to be cultivated in kitchen garden by certain rural communities for their daily need and uses. Fruits of species like *Pavetta indica*, *Cordia dichotoma*, *Dillenia indica*, *Diospyros peregrina*, *Grewia villosa*, *G. abutilifolia*, *Meyna laxiflora*, *Rhus sinuate*, *Elaeagnus conferta* are very nutritious, supplying the minerals like sodium, potassium, iron, calcium, Magnesium, phosphorus etc. Thus, the species recorded in present study are found promising role as a dietary supplement in the food habits of the tribal and other ethnic communities.

Table 1
Wild fruit plants used as food.

Scientific Name	Family	Common name	Habit and Uses
1. <i>Canavalia gladiata</i> (Jacq.) Dc.	Fabaceae	Abai	Stout, glabrous twiner. Tender pods and seeds used as vegetable.
2. <i>Capparis zeylanica</i> L.	Capparaceae	Wagati, Govind-phal	Scandant shrub. Unripe fruits used as a vegetable.
3. <i>Carissa carandus</i> Linn. <i>C. congesta</i> Weight.	Apocynaceae	Karvand	An evergreen thorny shrub. Berries are sweet and eaten raw and made in to pickle.
4. <i>Cordia dichotoma</i> Forst.	Boraginaceae	Bhokar	A deciduous tree. Unripe fruits are used as vegetable and ripe eaten as such. Small tree. Ripe fruits are eaten as raw.



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5. <i>Cordia gharaf</i> (Forsk.)	Boraginaceae	Gondani	Annual herbs. Ripe fruits eaten as raw and also as vegetables.
6. <i>Cucumis setosus</i> Cong.	Cucurbitaceae	Mehaki	An evergreen tree. A fleshy pulp of ripe yellowish fruit is consumed.
7. <i>Dillenia indica</i> Linn.	Dilleniaceae	Chalta	An evergreen tree. Fruits are pulpy and sweet.
8. <i>Diospyros peregrine</i> (Gaertn.) Gurke	Ebenaceae	Tembhurni	Large much branched shrub. Fruits are eaten as raw when ripe.
9. <i>Elaeagnus conferta</i> Roxb.	Elaginaceae	Ambgul, Amboli	A deciduous tree. The fruits are eaten raw, also made in to Jam, Jellies and Pickled.
10. <i>Emblica officinalis</i> Graerth.	Euphorbiaceae	Avla	A small tree. Ripe fruits are eaten as raw.
11. <i>Flacourtia latifolia</i> Burn.f.	Fabaceae	Tambat	A deciduous shrub. Fruits acidic and edible, also used in sarbat.
12. <i>Grewia abutilifolia</i> Vent.	Tiliaceae	Kharmati,	A deciduous scandant shrub. Fruits acidic and eaten as raw also used in sarbat.
13. <i>Grewia villosa</i> Willd.	Tilliaceae	Chikna	An evergreen large tree. Fruit pulp is eaten as such or with sugar, also used in preparation of Chatney & Jams.
14. <i>Limonia acidissima</i> L. (<i>Feronia elephuntum</i> Cor.)	Rutaceae	Kawath	Deciduous tree. Younger berries are used as a vegetable.
15. <i>Madhuca longifolia</i> (Koen.) Mac. Ver. <i>latifolia</i>	Sapotaceae	Moha	A small tree. Fruits eaten as raw when ripe.
16. <i>Meyna laxiflora</i> Robyns. (<i>Vanguris spinosa</i> Roxb)	Rubiaceae	Alu, Aliva	Perenial climber. Fruits used as vegetable and sold in market.
17. <i>Momordica dioica</i> Roxb.	Cucurbitaceae	Kartoli	A small tree. The green fruits are pickle, eaten as vegetable.
18. <i>Morinda pubescents</i> J.E.Sm. (<i>M. tinctoria</i> Roxb.)	Rubiaceae	Bartondi	A deciduous tree. Pods are used as vegetable.
19. <i>Moringa oleifera</i> Lam.	Moringaceae	Shevga	Twiner. Tender pods use as vegetables.
20. <i>Mucuna pruriens</i> (L.)DC	Fabaceae	Khaj-kuilee	Bushy, spiny shrub. Inner part of ripe barriers is eaten as a raw.
21. <i>Opuntia elatior</i> Mill.	Cactaceae	Nivdung	A shrub plant. Fruits are Pickled and eaten.
22. <i>Pavetta indica</i> Linn	Rubiaceae	---	A dwarf Palm. The ripe fruit drups are fleshy and sweet.
			Soft, erect, branched herb. Ripe berries are



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23. <i>Phoenix humilis</i> Royle	Arecaceae	Date palm	eaten as a raw. Shrub. Ripen fruits eaten raw and also in preparation of sarbat.
24. <i>Physalis minima</i> L.	Solanaceae	Chirbuti	A small shrub. Ripen fruits are eaten as raw and in preparation of sarbat.
25. <i>Rhus sinuta</i> Thumb.	Anacardiaceae	Amani	Small erect herb. Ripe barriers eaten as a raw.
26. <i>Securinega leucophyrus</i> (Willd.) Muell	Euphorbiaceae	Pithvan, Petuni	Tall trees. Drup fruits eaten as a raw, also in medicin.
27. <i>Solanum americanum</i> Mill (<i>S. nigrum</i> L.)	Solanaceae	Kanguni	A scandent shrub. The small reddish brown fruits are sweet.
28. <i>Traminalia chebula</i> Retz.	Combritaceae	Hirda	
29. <i>Zizyphus oeroplia</i> (L.) Mill.	Rhamnaceae	Ran-bor	

CONCLUSION

The studies contribute the database of traditional knowledge of wild fruits as a food. Total 29 plant species are investigated. *Capparis zeylanica* L., was first time reported used as vegetable. Majority of the fruits are eaten raw when ripe. Sweetish pulp or the fleshy pericarp of the ripe berries or drupes is generally consumed. Some unripe fruits used as vegetable or pickles are *Carrisa congesta*, *Madhuka longifolia*, *Mucuna pruriens*, *canavalia gladiata*, *cucumis setusus*, *Momordica dioica* etc. The findings suggest further investigation in to nutritional profits, processing methods, cultivation techniques, and conservational studies of reported plants. This will help in both horticultural and agricultural fields.

ACKNOWLEDGEMENT

An author is greatly thankful to BCUD, University of Pune for providing financial assistant of the project.

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