

INTERNATIONAL JOURNAL OF RESEARCHES IN BIOSCIENCES, AGRICULTURE AND TECHNOLOGY

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www.ijrbat.in

SOME LESS KNOWN WILD PLANT RESOURCES USED AS FOOD IN PUNE REGION OF MAHARASHTRA, INDIA

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ABSTRACT:

Pune region of Maharashtra is a treasury trove for wild edible plant resources. Detailed information of 156 species of wild plant species is enumerated in the present paper. In recent days, due to less awareness and anthropogenic pressure, many species of wild edibles are on the line of rarity. Therefore, there is urgent need to conserve and domesticate these valuable resources before whipping out. These wild edible germplasms are rich in neutraceuticles and phytochemicals. Extensive explorations were made for the documentation of ethnobotanical knowledge from the tribals, villagers, elder persons, residents etc.

Keywords-Wild edibles, ethnobotany.

INTRODUCTION:

Wild edible plants constitute an important source of dietary habit of tribals and villagers living in and around the forests. In the modern agriculture, they can be used for development of varieties. The wild genetic resources are the building blocks of new varieties which are eroding fastly due to spread of high yielding varieties, shrinking of natural habitats, rapid increase in urbanization and environmental threats, anthropogenic interference etc. Out of 17,000 documented species, one third species are of economic use (Chandel, 1997). The documentation and inventory preparation of wild edibles are essential for investigation of new crop of edible plants in the present era.

Efforts have been made by Billore, 1972; Cook, T. 1958 Repr. ed.; Datar, 1975; Kulkarni and Kumbhojkar, 1993; Kumbhojkar and Vartak 1988; Mokat, 2005; Upadhye *et al.* 1986; Vartak and Gadgil, 1959; Vartak and Gadgil, 1980 for

documentation of wild edible plants, their ethnobotany and uses in Maharashtra in general and Western Ghats in particular. In India, about 800 species of wild edible plants consumed as food plants by the tribal peoples (Jain *et al.* 1977; Arora 1978; Jain and Dam, 1979; Arora, 1981; Singh *et al.*1996) reported wild edibles from different parts of the country.

MATERIALS AND METHODS:

Several explorations were conducted during 2008-2012 in Pune region of Western Ghat's in districts *viz.*, Pune, Satara and Kolhapur. The details *viz.* local name, part used for consumption and mode of utilization etc. was documented. The wild edible plants were collected from different places and identified with the help of local floras Singh *et al.* 2000 & 2001; Sharma *et. al.* 1996; Cook, 1958, and also confirmed from Botanical Survey of India, Western Circle, Pune.

Table 1.- The list of plant documented at the time of study

Sr.N	Botanical Name of Plants	Family	Local Name	Part Used	Uses
1.	Abrus precatorius L.	Fabacae	Gunj	Leaves	Fresh and dried leaves are eaten.
2.	Aegle marmelos (L). Correa	Rutaceae	Bael	Fruits	Fruit pulp is eaten.
3.	Agave Americana L.	Agavaceae	Ghypat	Flower	Flower are fried, eaten as a vegetable
4.	Amaranthus spinosus L.	Amaranthacea	Katemath	Leaves	Used as vegetable.
5.	Amaranthus tricolor L.	Amaranthacea	Rajgira	Leaves	Used as vegetable.
6.	Amaranthus tricolor L.	Amaranthacea	Tanduja	Leaves	Used as vegetable.
7.	Amranthus viridis L.	Amaranthacea	Math	Leaves	Used as vegetable.
8.	Amorphophallus companulatus (Decene)	Araceae	Suran	Tuber	Tuber used as vegetable.
9.	Ampelocissus latifolia (Roxb.) Planch	Vitaceae	Nadena	Fruits	Tribal and local people eat ripe fruit.
10.	Annona reticulate L.	Annonaceae	Ramphal	Fruit	Ripen fruit are eaten.
11.	Annon squamosa L.	Annonaceae	Sitaphal	Fruit	Ripen fruit are eaten.
12.	Areca catechu L.	Areacea	Supari	Nut	Nut are eaten, often eaten with betel
13.	Artocarpus heterophyllus Lam.	Moraceae	Phanas	Fruit	Fruit and seeds are edible.

14.	Asparagus racemosus Willd.	Liliaceae	Shatavari	Tuberous root	Root powder taken with milk.
15.	Averrhoa bilimbii L.	Averrhoaceae	Bilimbi	Fruit	Fruits are edible, pickles prepared from
16.	Bambusa arundianacea (Retz.) Willd.	Poaceae	Kalak	Rhizome	fruit. New shoot used as vegetable.
17.	Basella rubra L.	Basellaceae	Mayalu	Leaves	Leaves used for vegetable.
18.	Benincasa hispida (Thunb.) Cogn.	Cucurbitaceae	Kohala	Fruit	Fruit used as vegetable.
19.	Borassus flabellifer L.	Arecaceae	Tad	Fruit	Fruits are edible.
20.	Brassica juncea (L.) Czem. & Coss.	Brassicaceae	Mohair	Leaves	Used as vegetable.
21.	Bridelia retusa (L.)	Ephorbiaceae	Asana	Fruit	Ripened fruits are edible.
22.	Bridelia squamosa (Lam.) Gehm	Ephorbiaceae	Asana	Fruit	Ripened fruits are edible.
23.	Cajanus cajan (L.) Millsp.	Fabaceae	Tur	Seed/pod	Used as vegetable.
24.	Canavalia ensiformis (L.) DC	Fabaceae	Abai	Fruit	Used as vegetable.
25.	Capparis moonii Wight.	Capparaceae	Waghati	Fruit	Ripe fruit are edible. Raw fruit are
26.	Capparis sepiaria L.	Capparaceae	Waghati	Fruit	cooked and used as vegetable. Ripened fruit are edible.
27.	Capparis zeylanica L.	Capparaceae	Waghati	Fruit	Fruits are edible.
28.	Carissa congesta Wight.	Apocynaceae	Karvand	Fruit	Unripe fruits are used for preparation
29.	Carica papaya L.	Caricaceae	Papai	Fruit	of pickles and ripened fruits for making Fruit are eaten.
30.	Caryota urens L.	Araceae	Bherli-mad	Seed	Seeds are eaten.
31.	Cassia fistula L.	Caesalpiniacea	Bahava	Fruit pulp	Pulp of the pod is eaten.
32.	Cassia occidentalis L.	Caesalpiniacea	Tarvad	Leaves	Used as vegetable.
33.	Cassia pumila Lam.	Caesalpiniacea	Chinchani	Seed	Seeds are eaten.
34.	Cassia tora L.	Caesalpiniacea	Takla-	Leaves	Leaves and young shoots used as
35.	Cayratia camosa Gagnep.	Vitaceae	tarvad Dukarvel	Leaves, stem and	Boiled leaves and stem are used for
36.	Celosia argentea L.	Amaranthacea	ambat Kardu	fruit Leaves	vegetable. Ripen fruit eaten. Leaves used as vegetable.
37.	Ceropegia bulbosa Roxb.	Asclepiadacea	Khapparka	Tuber	Tubers are edible.
38.	Chlorophytum tuberosum (Roxb.)	Liliaceae	du Phodshi	Leaves, Tuber	Leaves are used as vegetable. Tuber are
39.	Baker Cissus adnata Roxb.	Vitaceae	Naden	Leaves	cooked leaves are eaten.
40.	Cissus discolor Blume	Vitaceae	Telicha vel	Fruit	Fruits are eaten.
41.	Cissus quadrangularis L.	Vitaceae	Kandvel	Stem	Stem are eaten in cirries.
42.	Cissus rependa Vahl.	Vitaceae	Gendal	Stem	Juice obtained from the vines is
43.	Cissus repens Lam.	Vitaceae	Basil	Leaves	drinkable. Leaves are cooked and eaten.
44.	Citrullus colocynthis (L.) Schrad	Cucurbitaceae	Kadu- indrayan	Grains	seeds are edible.
	Citrullus lanatus (Thunb.) Mats &	Cucurbitaceae	Tarbuj	Fruit	Fruits are edible
	Nakai Citrus medica L.	Rutaceae	Mahalungi	Fruit	Fruits are eaten and also used for
	Clerodendrum serratum (L.) Moon	Verbenaceae	Bharangi	Leaves	making juice. Leaves are used as a vegetable
	Coccinia grandis (L.) Voigt	Cucurbitaceae	Tondli	Fruit	Fruits are edible and used as vegetable.
	Cocos nucifera L.	Arecaceae	Narel	Fruit	Leaves are used for thatching.
	Coix lachryma-jobi L.	Poaceae	Kusav	Seeds	Seeds are used for making necklace.
	Colocasica esculenta (L.) Schott	Araceae	Bhajiche	Leaves	Leaves are used as a fodder for live Leaves used as vegetable
	Commelina benghalensis L.	Commelinacea	alu Kena	Leaves	Leaves used as vegetable
	Cordia dichotoma Forst	e Boraginaceae	Bhokar	Fruit	Fruits are edible
	Coriandrum sativum L.	Apiaceae	Kothimbir	Fruit	Fruit used as condiment
	Costus speciosus (Koen) J.E.Sm.	Costaceae	Coast	Leaves	Leaves used as vegetable
	Cucumis callosus (Roettl.) Cogn.	Cucurbitaceae	-	Fruit	Fruits used as vegetable
	Cucumis melo L.	Cucurbitaceae	Karit	Fruit	Fruits are edible
	Cucurbita maxima Duch.ex.Lam	Cucurbitaceae	Tambda	Fruit	Fruits used as vegetable
	Cucurbita pepo L.	Cucurbitaceae	Bhopala Kashi-	Fruit	Fruits used as vegetable
	Curcuma amada Roxb.	Zinziberaceae	Bhopala Ran-Halad	Tuber	Tuberous root used for preparation of
	1				pickles

	Curcuma aromatica Salisb	Zinziberaceae	Amba- Halad	Tuber	Tuberous root used for preparation of pickles
	Cyamopsis tetragonolobus (L.) Taub	Fabaceae	Gawar	Fruit	Fruits used as vegetable
	Dendrophthoe falcata (L.f.)	Loranthaceae	Bandgul	Fruit	Fruits are eaten.
	Dillenia indica L.	Dilleniaceae	Mota- Karmal	Fruit	Sepals are eaten
	Dioscorea alata L.	Dioscoreaceae	Ghorkhand	Tuber	Tubers used as vegetable
	Dioscorea bulbifera L.	Dioscoreaceae	Karanda	Tuber	Tubers used as vegetable
	Dioscorea esculenta (Lour.)	Dioscoreaceae	Kangar	Tuber	Tubers used as vegetable
	Burkill Dioscorea pentaphylla L.	Dioscoreaceae	Shendvel	Inflorescence	Flowers used as vegetable.
	Diospyros melanoxylon Roxb.	Ebenaceae	Tendu	Fruit	Fruits are edible
	Embelia basaal (R & S.) A. DC.	Myrsinaceae	Ambati	Fruit	Fruits are edible
	Trans. Linn Emblica officinalis Gaertn	Euphorbiaceae	Avala	Fruit	Fruits are edible
	Ensete superbum (Roxb.) Cheesm	Musaceae	Rankel	Fruit	Fruits are edible
	Ficus benghalensis L.	Moraceae	Wad	Fruits	Fruits are edible.
	Ficus racemosa L.	Moraceae	Umbar	Fruits	Fruits are edible.
	Flacortia Montana Grah	Flacourtiaceae	Attak	Fruit	Ripe fruits are edible
	Garcinia indica (Du Petit-Thou.)	Clusiaceae	Amruta,	Fruit	Ripe fruits are edible. Fruits used for
	Choisv Garcinia xanthochymus Hook. f.	Clusiaceae	Kokum Kadu	Fruit	preparation of juice and syrup. The Ripe fruits are edible
	ex T Garuga pinnata Roxb.	Burseraceae	Kokum Kakad	Fruit	Fruits are edible
	Grewia asiatica L.	Tiliaceae	Phalsi	Fruit	Ripe fruits are edible
	Grewia tillifolia Vahl	Tiliaceae	Dhaman	Fruit	Ripe fruits are edible
	Habenaria grandifloriformis Blatt.	Orchidaceae	Hilkurkand	Fruit	Bulbs are edible
	& McC. Hibiscus sabdariffa L.	Malvaceae	Ambadi	Leaves	Leaves used as a fodder.
	Holarrhena pubescens (Buch	Apocynaceae	Pandhara	Pod	Young pods used as a vegetable
	Ham.) Wall. ex G. Don Hyphaene dichotoma (White)	Arecaceae	Kuda Ravan-Tad	Fruit	Fruits are edible
	Furtado Indigofera cordifolia Heyne	Fabaceae	Bechka	Seeds	Used like cereal.
	Indigofera linifolia retz.	Fabaceae	Phandarph	Grains	Used like cereal.
87.	Ipomoea aquatica Forssk.	Convolvulacea	alli Nalichi	Leaves	Used as leafy vegetable
07.	Ixora brachiata Roxb.	e Rubiaceae	bhaji Lokhandi	Fruit	Fruits are edible
	Ixora coccinea L.	Rubiaceae	Devara	Fruit	Fruits are edible
	Lantana camara L				
		Verbenanceae	Ghaneri	Fruit, Leaves	Fruits are edible. Leaves are eaten with sandal bark as like beetal leaf.
	Leea indica (Burm.f.) Merr.	Leeaceae	Dinda	Leaves	Used as leafy vegetable.
	Limonia acidissima L.	Rutaceae	Kavath	Fruit	Fruits are edible
	Luffa acutangula (L.) Roxb.	Cucurbitaceae	Ran-dodka	Fruit	Fruits used as vegetable
	Madhuca longifolia (Koen.) Mac Bride	Sapotaceae	Moha	Fruit	Fruits are edible
	Mammea suriga (BuchHam. ex Roxb.) Kosterm.	Clusiaceae	Surangi	Fruit	Ripe fruits are edible
	Mangifera indica L.	Anacardiaceae	Amba	Fruit	Fruits and endosperm are edible
	Manilkara hexandra (Roxb.) Dub	Sapotaceae	Khirni	Fruit	Fruits are edible
	Manilkara zapota (L.) van Royen	Sapotaceae	Chikku	Fruit	Fruits are edible
	Marsdenia tenacissima (Roxb.) Moon	Asclepiadacea e	-	Thalamus	Thalamus is edible.
	Memecylon umbellatum Burm. f. Fl	Melastomatace ae	Anjan	Fruit	Ripe fruits are edible; Dye is prepared from leaves and fruits.
	Meyna laxiflora Robyns	Rubiaceae	Alu	Fruit	Mature fruits are edible
	Mimusopa elengi L.	Sapotaceae	Bakul	Fruit	Fruits are edible
	Momordica charantia L.	Cucurbitaceae	Karle	Fruit	Fruits used as vegetable
	Momordica dioica Roxb. ex Willd.	Cucurbitaceae	Kartoli	Fruit	Fruits used as vegetable
	Moringa concanensis Nimmo.	Moringaceae	Kadushegat	Leaves, Fruit	Leaves and fruits are cooked and used
	Moringa oleifera Lam.	Moringaceae	Shevga	Leaves, Fruit,	as vegetable Leaves, fruits and flowers are cooked
	Musa paradisiaca L.	Musaceae	Kela	Flowers Fruit	and used as a vegetable Fruits are edible. Flowers used as
	Myristica fragrans Houtt	Myristicaceae	Jayphal	Seed, seed coat,	Used as a spice and condiments
	Myristica fragrans Houtt	Myristicaceae	Jayphal	Seed, seed coat, Epicarp	Used as a spice and condiments

Neolamarckia cadamba (Roxb.)	Rubiaceae	Kadam	Flowers	The flower heads are edible
Bosser Nymphaea pubescens Willd	Nymphaceae	Kamal	Root stock	Used as vegetable.
Ocimum gratissimum L.	Lamiaceae	Tulsi	Leaves	Leaves are eaten.
Ocimum gratissimum L.	Lamiaceae	Sabja	Leaves	Leaves used as vegetable.
Ocimum tenuiflorum L.	Lamiaceae	Tulas	Leaves	Leaves are edible.
Oroxylum indicum (L.) Vent. Dec	Bignoniaceae	Tetu	Seeds	Seeds are edible.
Oryza sativa L.	Poaceae	Bhat	Grain	Grains are used as a cereal.
Oxalis corniculata L.	Oxalidaceae	Ambusi	Leaves	Used as leafy vegetable.
Panicum miliaceum L.	Poaceae	Varai	Grain	Seeds used as a cereal.
Paspalum scrobiculatum L.	Poaceae	Harik	Grain	Used like cereals.
Pavetta indica L.	Rubiaceae	Papat	Flowers	Used as vegetable.
Pergularia daemia (Forssk.) Choiv	Asclepiadacea	Utran	Flower,	Used as vegetable.
Phaseolus sublobatus Roxb.	Fabaceae	Makani	Inflorescence Seed	Used like cereals.
Physalis minima L.	Solanaceae	Chirboti	Fruit	Fruits and Thallamus are edible
Plumbago zeylanica L.	Plumbaginace	Chitrak	Leaves	Leaves used as vegetable
Portulaca oleracea L.	Portulaceaeae	Ghol	Leaves, shoots	Leaves used as vegetable
Portulaca quadrifida L.	Portulaceaeae	Chival,	Whole plant	Whole plant used as a vegetable.
Psidium guajava L.	Myrtaceae	Chota Ghol Peru, Jamb	Fruit	Fruits are edible
Puraria tuberosa DC.	Fabaceae	Pithana	Root	Boiled or raw tuberous roots are eaten.
Raphanus sativus L.	Brassicaceae	Mula	Root	Used as vegetable
Remusatia vivipara (Roxb.)	Araceae	Mayajal	Leaf	Leaves used as vegetable
Schott. & Endl Ricinus communis L.	Euphorbiaceae	Erand	Seed	Seeds are edible
Santalum album L.	Santalaceae	Chandan	Fruit	Fruits are edible
Schleichera oleosa (Lour.) Oken	Sapindaceae	Kusum	Fruit	The ripe fruits are edible
Semecarpus anacardium L.f.	Anancardiacea	Bibba	Fruit	Decoction of fruits used for gargling
Sesamum orientale L.	Pedaliaceae	Rantil	Seeds	Seeds are edible
Setaria glauca Beauv.	Poaceae	Kolara	Seeds	Used as a cereal.
Smithea sensitiva Ait	Fabaceae	Kevla	Whole plant	Used as leafy vegetable
Solanum anguivi Lam.	Solanaceae	Dorli	Leaves, Fruit	Fruits are used as a vegetable
Solanum melongena L.	Solanaceae	Wange	Fruit	Used as vegetable
Solanum tuberosum L.	Solanaceae	Batata	Tuber	Used as vegetable
Solena amplexicaulis (Lam.)	Cucurbitaceae	Gomati	Fruit	Fruits are edible
Gandhi Spondias pinnata (L.f.) Kurz	Anacardiaceae	Ambada	Fruit	Fruits are edible
Sterculia urens Roxb.	Sterculiaceae	Kandol	Kernels	Kernels are edible
Syzygium cumini (L.) Skeels	Myrtaceae	Jambhul	Fruit	Ripe fruits are edible
Tagetes erecta L.	Asteraceae	Zendu	Flower	Flowers are edible
Tamarindus indica L.	Caesalpiniacea	Chinch	Seed, Pulp	Both ripe and unripe fruits are edible
Terminalia bellirica (Gaertn.) Roxb.	Combretaceae	Behda	Kernels	Mesocarp and seeds are edible
Tetrastigma lanceolarium (Roxb.) Planch.	Vitaceae	Choral vel	Fruits	Eaten after cooking.
Tricholepis amplexicaulis Clarke	Asteraceae	Dahan	Leaves	Used as leafy vegetable
Trichosanthes dioica Roxb.	Cucurbitaceae	Padval	Fruit	Used as vegetable
Vigna radiata (L.) Wilczeck	Fabaceae	Udid	Seed	Seeds are used for making fry.
Vigna vexillata (L.) A.Rich.	Fabaceae	Halunda	Root	Raw roots are eaten.
Woodfordia fruticosa (L.) Kurz	Lythraceae	Dhayati	Flower	Dried flowers are eaten
Xanthosoma sagittifolium	Araceae	Vadiche alu	Leaves	Used as leafy vegetable
Zingiber officinale Rosc.	Zingiberaceae	Ale	Rhizome	Rhizome are edible
Ziziphus jujuba Mill	Rhamnaceae	Bor	Fruit	The ripe fruits are edible
Ziziphus rugosa Lam.	Rhamnaceae	Toran	Fruit	Fruits are edible
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RESULTS AND DISCUSSION:

The 156 wild plants species were recorded and enumerated. Leaves of 36 plant species are used as a vegetable and fruits of 79 species, inflorescence of 2 species, 10 tuberous species, 13 seeds, 05 grains, 2 rhizome, 5 roots, 1 whole plant, thalamus of 1 species, and seed aril of one species are utilized and consumed. Tribals, villagers, tourists etc. are utilizing these wild edibles as vegetable, for making different products or eaten as a raw. Germplasms of many wild edibles viz. Colocasias, Dioscoreas, Ipomea, Momordica, Xanthosoma, Cucumis, Solanum, Cajans, Vigna, Oryza, Eleusine, and millets etc. have been conserved and maintained by tribals and villagers in and around their houses and their agricultural fields. They are selecting the best one through mass selection and cultivating near the houses. It is also observed that, tribals exchanging the germplasm resources for sowing, consumption, for offering to god or goddess etc. There are limited reports regarding wild edible plants. Kulkarni and Kumbhojkar (1993) reported 40 kitchen garden There is need to investigate phytochemicals, neutraceuticles etc. for the betterment of society health.

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