

Wild edible plants used by tribals of Alirajpur district, Madhya Pradesh

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ABSTRACT:

Present study reports 52 plant species of wild edible plants distributing in 35 families which are consumed by tribals of Alirajpur district, Madhya Pradesh, India. Different life forms used as wild edible resources are Trees (29), Herbs (14), Climber (7) and shrubs (2). Fruits of 23 plant species, leaves and young leaves of 11 plant species, seeds of 5 plant species, underground parts of 6 plant species, flowers and inflorescence of 4 plant species and young tender shoots of 3 plant species are consumed by tribal of Alirajpur district, Madhya Pradesh. Present finding of the study reveals that plant and parts of *Amaranthus spinosus* L., *Amaranthus viridis* L., *Amorphophalus paeonifolius* (Dentst.) Nic., *Cordia macrolepis* Hook f. Thomp., *Cordia dichotoma* G. Forst., *Rivea hypocrateriforis* Choisy, *Portulaca quadrifida* L., *Oxalis corniculata* L., *Sennatoria* (L.) Roxb., *Solanum xanthocarpum* Schrad & J C Wendle are consumed during drought or scarcity of food.

KEYWORDS: Tribal, Wild, Bhil, Bhilala, Alirajpur

INTRODUCTION:

Alirajpur district is one of the tribal district of Madhya Pradesh, India and lies between 73°-30' to 70°01' E longitude and 21°-30' to 23°-55' N latitude. Total area of the district is 2165 sq. km. of which forest occupies 843 sq. km. Forest of Alirajpur include under tropical forest which are further subdivided into dry teak forest, dry mixed deciduous forest and open scrub forests. Topographically the study area can be divided into two regions namely Vindhya and Narmada valley. Most dense forests are confined to Kattiwada, Bhabra, Kadwal, Ratanmal, Mandhar, Chatliyapani, Aamkhut, Sorawa and Sondwa regions where rich pockets of tribal population are found. 87 percent population of Alirajpur district is tribal. Chief tribal inhabiting in the Alirajpur district are Bhil, Bhilala, Pateliya.

Wild resources have been utilized by human being since very ancient time. Wild food plants usually considered as famine food or emergency food and significant among tribal community. Tribal have acquired immense information about the use of wild flora and fauna. They possess significant knowledge about bio resources and their uses. They fulfill their daily needs from forest and their surroundings. They also consume alternative source of food and food plants to survive during drought and adverse condition. Indian tribal are utilizing over 9500 wild plants for various purposes of which 78.94 percent are used for medicinal purposes and nearly 41.05 percent of wild plants are used as edible. (Anonymous, 1995). Wild vegetables provide adequate number of crude fibres, fats, carbohydrate, proteins, mineral elements like Ca, N, K, Mg, Cu, Zn in addition to vitamins. (Gogoi and Kalita, 2014). Studies on wild food plants have been carried out by several workers from various parts of the country. [Jain, 1963, Arora and Pandey, 1996]. Literature survey reveals that a few studies have been made regarding the wild food plants in Madhya Pradesh [2, 3, 4, 5, 186]. Study area is less known in respect to Wild food plants. Present study was an attempt to know the wild food plants of Alirajpur district, Madhya Pradesh.

MATERIAL AND METHODS:

Plant survey was made in the tribal belt of Alirajpur district during 2015 to 2021 and information on wild food plants was collected. Interview was conducted among local tribal in respect to wild food plants and information were gathered. Plants were identified with the help of flora and available literature. [9, 10, 11, 13]. Herbarium specimens were prepared following customary methods [12]. All the herbarium plant specimens were deposited in herbarium of PMB Gujarati Science College, Indore.

RESULTS AND DISCUSSION:

A total of 52 plant species belonging to 35 families and 49 genera has been recorded which are consumed by tribal community of Alirajpur, MP as wild food resources. (Table:1). Different life forms used as Wild edible resources by tribal of Alirajpur district are Tree (29), Herb (14), Climber (7) and Shrub (2). Various plant parts such as leaves, shoots, flowers, fruits, rhizome, tubers, bulbs, young tender twigs are often collected from forests or nearby forest regions. These are usually consumed either raw or eaten after cooking. Leaves or twigs are boiled and cooked as green vegetables. Soft shoots are directly consumed after roasting and young shoots are preferred as vegetables after cooking. Ripe fruits are directly eaten raw and pickles are prepared from unripe fruits. Seeds are roasted and consumed. Wild food plants fulfill the dietary and nutritional needs of tribal of the study area. Wild vegetable provides adequate number of crude fibres, fat, carbohydrate, proteins, mineral elements like Ca, N, K, Mg, Mn, Cu, Zn in addition to vitamins [14]. Tiwari (2008) reported that Leaves of *Oxalis corniculata*, *Amaranthus viridis*, flowers of *Madhuca longifolia*, *varlatifolia*, *Semecarpus anacardium*, fruits of *Annona squamosa*, *Mangifera indica*, tubers of *Dioscorea bulbifera*, *D. hispida* are used as vegetables by Sahriya and Gond tribes of Central India [17]. Comparison reveals that

these plants are also used by tribal of Alirajpur district, Madhya Pradesh. For similar purpose. Leaves of *Amaranthus viridis*, *Aspinosus*, *Chenopodium*, *Sennatoria* are used as wild food resources by Bhil communities in Ratlam district, MP [5] which are also consumed by tribal of Alirajpur district, MP. Leaves of *Rivea hypocrateriformis* are used as vegetable during drought and scarcity of food in Nimar region of MP [15,16]. Similar uses of this plant have also been observed in the study area. Comparative studies indicate that land and plant parts *Oxalis corniculata*, *Amaranthus viridis*, *Madhucal longifolia var latifolia*, *Dioscorea bulbifera*, *D hispida*, *Amorphophalus paeoniifolius*, *Cordia dichotoma*, *Rivea hypocrateriformis*, *Ensetes superbum*, *Portulaca quadrifida* and *Trianthema portulacastrum*, *Zizphus xylopyrus*, *Solanum xanthocarpum* are commonly used by Bhil, Bhilala, Pateliya, Gond, Sahariya and Korkus in Central India.

CONCLUSION:

Study on wild edible food plant utilization in study area revealed that tribal community usually consumes wild food plants as emergency food. Wild food plants are closely involved with socio economic upliftment of tribal people. Large scale cultivation of these wild food plants of study area may provide good economy. There is large number of plants which contain rich good quality nutrients. These plant species may ensure the nutritional security and nourishment for our future generation.

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Table-1: Wild edible plants used by tribals of Alirajpur district, MP

S.No	Botanical name	Family	Vernacular name/Herbarium number	Habit	Plan parts and mode of preparation
1.	<i>Aegle marmelos</i> (L.) Correa	Rutaceae	Bel	Tree	Ripen fruits are as raw or bel shake are consumed
2	<i>Alangium salvifolium</i> (L.f.) Wangerin	Cornaceae	Ankol DSC236	Tree	Fruit pulp edible
3.	<i>Annona squamosa</i> L.	Annonaceae	Sitaphal DSC398	Tree	Fruits are edible and eaten
4.	<i>Amorphophalus paeniifolius</i> (Dennst.) Nicolson	Araceae	Jangli suran DS C2098	Herb	Corm boiled and eaten. boiled and eaten.
5.	<i>Amaranthus spinosus</i> L.	Amaranthaceae	DSC293	Herb	Leaves and young twigs are used as vegetable
6	<i>Amaranthus viridis</i> L.	Amaranthaceae	DSC1714	Herb	Seeds are used as grains during scarcity of food.
7.	<i>Argyreia nervosa</i> (Burm f.) Boj	Convolvulaceae	Phangvela DSC490	Climber	Leaves are used as green vegetable
8.	<i>Basella alba</i> L.	Basellaceae		Climber	Leaves and stem are used as vegetable.
9.	<i>Buchanania cochinchinensis</i> (Lour) M.R. Almeida	Anacardiaceae	Chironji / Achar DSC1532	Tree	Seeds are consumed
10	<i>Bombax ceiba</i> L.	Malvaceae	DSC123	Tree	Young stem are consumed during scarcity of food. Seeds edible
11.	<i>Borassus flabellifer</i> L.	Arecaceae	Tad DSC443, 227	Tree	Fleshy endocarp is eaten
12.	<i>Carissa spinarum</i> L.	Apocynaceae	Karonda	Shrub	Ripe fruits are eaten raw. Unripe fruits are used as vegetable
13.	<i>Catunaregam spinosa</i> (Thunb.) Tirveng	Rubiaceae	Mainphal	Tree	Ripe fruits are eaten after cooking.
14.	<i>Ceropegia bulbosa</i> Roxb.	Apocynaceae	DSC1580	Herb	Leaves are eaten as vegetable. Bulbs are boiled and eaten.
15.	<i>Careya arborea</i> Roxb.	Lecythidaceae	Kumbhi DSC2522	Tree	Leaves are used as vegetable. Fruits are eaten raw.
16.	<i>Cheilocostus speciosus</i> (Koenig) Schum.	Zingiberaceae	DSC161	Herb	Tubers are washed, cooked and eaten as

	eni)J E Smith		4		vegetables. .
17	<i>Cocciniagrandis</i> (L.)Voight	Cucurbitaceae	TundruD SC494,6 52	Climber	Green fruits are consumed as vegetable.
18.	<i>Cordiamacleodii</i> Hook.f ex Thompson	Boraginaceae	Gondi DSC163 4	Tree	Flowers are edible
19.	<i>Cordiadichotoma</i> GForst.	Boraginaceae	Gondi DSC628	Tree	Young inflorescence and floral buds are consumed.
20.	<i>Dioscoreahispida</i> Dennst.	Discoreaceae	DsC1245	climber	Tubers are collected ,washed and kept in open place for few days.These tubers are boiled,peeled off and eaten.
21	<i>Diospyrosmelanoxylon</i> Rob. xb.	Ebenaceae	Temru 175	Tree	Ripe fruit of temru is eaten.
22.	<i>Dendrocalamusstrictus</i> (Roxb.)Nees	Poaceae	Baans	Tree	Tender shoots are edible and consumed as food.
23.	<i>Drimiaindica</i> (Roxb.)Jessop	Asparagaceae	Janglikan do	Herb	Leaves are used as vegetable.
24.	<i>Ensetesuperbum</i> (Roxb.)Cheesman	Musaceae	Janglikela DSC126 9	Shrub	Rhizomes boiled and eaten. Unripe fruits are used as vegetables.
25.	<i>Ficuslacor</i> Buch-Ham	Moraceae	DSC 811	Tree	Fruits are edible
26.	<i>Grewiasubaequalis</i> Baill.	Malvaceae	Phalsa	Tree	Fruits are edible.
27.	<i>Grewiatilifolia</i> Vahl.	Malvaceae	Dhaman DSC171 0	Tree	Fruits are edible
28.	<i>Ipomoea aquatica</i> Forssk.	Convolvulaceae	DSC 962	Climber	Young twigs and leaves are used as vegetable
29.	<i>Manilkarahexandra</i> (Roxb.)Dubard	Sapotaceae	Khirmi DSC 2021	Tree	Ripe fruits are eaten.
30	<i>Madhucalongifolia</i> var. <i>latifolia</i> (Roxb.)A Chev	Sapotaceae	Mahua	Tree	Fleshy petals are eaten.
31.	<i>Macratamiauniflorum</i> (Lam.)Verdc.	Fabaceae	Kulthi DSC626	Herb	Seeds are consumed as food
32.	<i>Moringaoleifera</i> Lam.	Moringaceae	Surjjana DSC870	Tree	Young leaves are consumed as vegetable. Green fruits are used as vegetable.Flowers are also eaten.
33	<i>Momordicadioica</i> Roxb.ex Willd.	Cucurbitaceae	Katele DSC409	Climber	Young green unripe fruits are used as green vegetable.
34.	<i>Mangiferaindica</i> L.	Anacardiaceae	Aam DSC204 6	Tree	Ripe fruits are eaten.Picklesare prepared from unripe green fruits.
35.	<i>Oxalis corniculata</i> L.	Oxalidaceae	KhattiBhaji DSC378	Herb	Leaves are used as vegetable during scarcity of food.
36.	<i>Phoenix sylvestris</i> (L.)Roxb.	Arecaceae	Khajur DSC 474	Tree	Ripe fruits are eaten raw
37.	<i>Phyllanthusemblica</i> L.	Phyllanthaceae	AAmla DSC172 8	Tree	Ripe fruits are directly eaten.
38	<i>Pithecellobiumdulce</i> (Roxb.)Benth.	Fabaceae	Vilayti babul DSC862	Tree	Ripe fruits are eaten.
39.	<i>Portulacaquadrifida</i> L.	Portulacaceae	Bhaji DSC 918	Herb	Young leaves are consumed as vegetable.
40.	<i>Riveahypocrateriformis</i> Choisy	Convolvulaceae	Pan bel DSC 1730	Climber	Leaves are used as vegetable

41.	<i>Sennatoro</i> (L.)Roxb.	Fabaceae	Povada DSC137	Herb	Young leaves are used as vegetable.
42.	<i>Sesbaniagrandidiflora</i> (L.)Poir	Fabaceae	DSC122 8	Tree	Flowers are fried and eaten.
43.	<i>Solanumnigrum</i> L.	Solanaceae	Makoi DSC175 7	Herb	Unripe fruits were used as green vegetables.
44.	<i>Solanumxanthocarpum</i> Schrad& J.C Wendle.	Solanaceae	Bhatkateiya DSC870	Herb	Young green fruits are consumed as green vegetable.
45.	<i>Syzigiumcumini</i> 9 l.)Keels	Myrtaceae	Jamun DSC133	Tree	Fruits are edible.
46.	<i>Spondiaspinnata</i> (L.F.)Kurz.	Anacardiaceae	Amadi DSC179 0	Tree	Fruits are edible.
47.	<i>Tamarindusindica</i> L.	Fabaceae	Imli DSC817	Tree	Ripe pods are edible Unripe fruits are also eaten.
48.	<i>Terminaliabelirica</i> (Gaertn.)Roxb.	Combretaceae	BahedaD SC844,	Tree	Seeds are consumed.
49.	<i>Trapanatans</i> L.	Lythraceae	Singhada DSC 866	Herb	Seeds are roasted and eaten
50.	<i>Trianthemaportulacastrum</i> L.	Aizoaceae	Bhaji DSC101 72	Herb	Leaves are used as vegetables
51.	<i>Ziziphusjuzuba</i> Mill	Rhamnaceae	Ber DSC175 1	Tree	Fruits are eaten raw.
52.	<i>Ziziphusxylopyrus</i> (Retz.)Willd.	Rhamnaceae	GheniDS C1745	Tree	Fruits are eaten raw.

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