

# Exploration of Some Potential Nutritive Wild Edible Weeds of Aurangabad District, Maharashtra, India

Powar Priyatama V\*, Shirode Devendra S, Vishvakarma Sonam R, Vishwad Anuja A

<sup>1</sup> Pharmaceutics Department, Dr. D. Y .Patil College of Pharmacy, Akurdi Pune,44.

Maharashtra, India

**Abstract:-** India is well known for its “Indus-Vedic” cultural heritage. Wild edible plants or weeds are extensively utilised in the daily diet in various regions of India. Wild edible plants/weeds are critical for the sustenance of tribal communities in a form of food material and also as a source of income like timber and so on. With a vision of erasing the gap in traditional knowledge regarding utility of wild plant species and tapping the concealed potential resources for proper utilization, exploitation, and nutritive evaluation. The present study represents food potential of some traditional wild edible plants/ weeds in Aurangabad District Maharashtra.

Local surveys were directed at 10 chief local markets in various area of Aurangabad districts during diverse period from February 2017 to July 2018. Overall 04 enthusiastic plant collectors and sellers were questioned using structured questionnaire, formal-informal and extensive communications to gather comprehensive information about the plant materials. A combined assessment of 15 wild vegetables was also carried out to arrange them for conservation, and sustainable management.




Present work deals with the demanding study of different wild edible weeds used by rural people from Aurangabad District Maharashtra. It reveals vital




information about numerous edible parts of 15 plant species. This type of comprehensive survey technique could support to educate the budding pharmacist about the potential health benefits of wild edible plants/ weeds which further can be amalgamated in profitable crop plants. Such methodology will supports to improve food shortage, economy in rural areas and helps in revival of infertile lands.



**Keywords:-** Wild Edible Weeds, Local Markets, Traditional Knowledge, Nutritional Value.


## I. INTRODUCTION

A weed is a plant developing where it is not wanted, competing with cultivated plants for food, light, etc. and spread much faster than other plants. The potential utility of edible wild weeds is has long been ignored by agriculture interventions and gardening enthusiasts alike which may nature’s finest nutrition supplements packed with iron, calcium, vitamins, antioxidants, fibers, and can include as a healthy, balanced diet as indigenous super foods. Many people in ethnic areas still use these edible plants/ weeds as a rich culinary repertoire, food supplement, preserved for dry period or sold in rural market which acts as an economical support pillars for them. Apart from extraordinary nutritional value and are immune to many diseases by use as ‘Ayurveda’ in Indian Folk- medicine[1-6].

Sr. No.	Biological name	Vernacular name/ common names	Used plant parts	Recipe commonly follows	Pharmacological Activity
1	<i>Amaranthus viridis</i> 	Wild amaranth	<ul style="list-style-type: none"> <li>Leaves</li> <li>Stem</li> <li>Flower</li> <li>Root</li> <li>Seed</li> </ul>	<ul style="list-style-type: none"> <li>Added to salades and soups</li> <li>Used as vegetables</li> <li>cooked as a spinach</li> <li>Seed can consume as cooked seeds</li> </ul>	<ul style="list-style-type: none"> <li>Antidiabetic</li> <li>Antihyperlipidemic</li> <li>Antioxidant</li> <li>Emollient</li> <li>Vermifuge</li> <li>Root juice use in inflammation during urination</li> <li>Treat constipation</li> <li>Leaf show diuretic, febrifuge and purgative action</li> <li>Leaf sap used for eye wash to treat eye infections</li> <li>Use for preparation of soap</li> </ul>
2	<i>Portulaca olerace</i> 	Purslane	<ul style="list-style-type: none"> <li>Leaves</li> <li>Stem</li> <li>Seeds</li> </ul>	<ul style="list-style-type: none"> <li>Added to salads and stews and stuffing</li> <li>Leaves ,stems raw or cooked used as a food</li> <li>Used as a thikner in soup <ul style="list-style-type: none"> <li>Whole seeds /powder mixed with cereals for use in gruels, bread, pancakes etc</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>leaves are a rich in Beta Carotene, Mg, K</li> <li>Rich in Alpha Lineolic Acid ,Omega 3 Fatty Acid <ul style="list-style-type: none"> <li>Antibacterial</li> <li>Antiscorbutic</li> <li>Depurative</li> <li>Diuretic</li> <li>Febrifuge</li> </ul> </li> <li>Use to treat coughs, sores, skin infections, stomach aches , headaches, dyspepsia</li> <li>Preventing heart attacks and strengthening the immune system <ul style="list-style-type: none"> <li>Muscle-relaxing effects</li> <li>Wound healing activity</li> </ul> </li> <li>Use in treatment of insect bite /snake bites, boils, sores, diarrhea, hemorrhoids, postpartum bleeding, and intestinal bleeding</li> </ul>
3	<i>Trifolium fucatum</i> 	<ul style="list-style-type: none"> <li>Common Name: Clover</li> <li>Family: Fabaceae or Leguminosae</li> </ul>	<ul style="list-style-type: none"> <li>Leaves</li> <li>Stems</li> <li>Flowers</li> <li>Seed pods</li> <li>Root</li> </ul>	<ul style="list-style-type: none"> <li>Leaves added to salades and flower to tea</li> <li>Cooked as spinach</li> <li>Powder obtained by dried seed ,pods and flowers utilized as a flour</li> </ul>	<ul style="list-style-type: none"> <li>Blood purifier</li> <li>Use in treatment of Gaut, <ul style="list-style-type: none"> <li>Anti-rheumatic</li> <li>Anti-scorpulatic</li> <li>Depurative</li> <li>Surfactant</li> <li>Tonic</li> </ul> </li> <li>For the treatment of fevers, coughs, colds, leucorrhoea plant infusion is utilized</li> <li>Plant root are also slightly aperient, cholagogue, depurative, strongly diuretic, hepatic, laxative, stomachic and tonic</li> </ul>
4	<i>Taraxacum officinale</i>	<ul style="list-style-type: none"> <li>Common Name: Dandelion -</li> </ul>	<ul style="list-style-type: none"> <li>Leaves</li> <li>Roots</li> <li>Flowers</li> </ul>	<ul style="list-style-type: none"> <li>Leaves added to salad , roots to soups and stews, roast to</li> </ul>	<ul style="list-style-type: none"> <li>Rich In Vit A,K And C Ca ,Fe,K <ul style="list-style-type: none"> <li>Rich source of Protein</li> <li>Roots are hypoglycemic</li> </ul> </li> </ul>

		<p>Kukraundha, Kanphool, dandelion</p> <ul style="list-style-type: none"> <li>Family: Asteraceae /Compositae</li> </ul>	<ul style="list-style-type: none"> <li>Stem</li> </ul>	<p>boil to make a coffee substitute, add flowers to salads or coat with batter and fry</p> <ul style="list-style-type: none"> <li>It is also used to prepare Pink Dandelion Wine, Dandelion Root coffee, Dandelion Jelly</li> </ul>	<ul style="list-style-type: none"> <li>Roots are mild antibiotic for yeast infections</li> <li>Use in gall bladder and urinary disorders, gallstones, jaundice, cirrhosis, dyspepsia treatment</li> <li>Antibacteria (against bacteria such as Staphylococcus aureus, Meningococci, Bacillus dysenteriae, B. typhi, C, Pneumococci, diphtheria)</li> <li>Latex used for gall bladder stone</li> <li>Magenta-brown dye is obtained from the root</li> </ul>
<p>5</p>	<p><i>Chenopodium album</i></p> 	<ul style="list-style-type: none"> <li>Common Name(s): Bacon weed, Fat hen, Goosefoot, Lambs quarters, Pigweed Lamb quarters</li> <li>Family: Chenopodiaceae</li> </ul>	<ul style="list-style-type: none"> <li>Leaves</li> <li>Shoots</li> <li>Seeds</li> <li>Flowers</li> </ul>	<ul style="list-style-type: none"> <li>Added to salads and stews</li> <li>Raita, paratha can be prepare</li> </ul>	<ul style="list-style-type: none"> <li>Rich In Iron Vit A,C And K . Ca ,Mg ,fiber</li> <li>Anthelmintic, antiphlogistic, antirheumatic, laxative, odontalgic activity commonly shown by leaf part of plant</li> <li>Use in treatment of rheumatism</li> <li>For urinary problems seeds are chewed</li> <li>The stem juice applied to patches and sunburn</li> <li>The root juice is beneficial in bloody dysentery</li> <li>Leaf juice act as a blood purifier</li> </ul>
<p>6</p>	<p><i>Cichorium intybus</i></p> 	<ul style="list-style-type: none"> <li>Common Name: Chichory</li> <li>Family: Asteraceae</li> </ul>	<ul style="list-style-type: none"> <li>Leaves</li> <li>Shoots</li> <li>Seeds</li> <li>Flowers</li> </ul>	<ul style="list-style-type: none"> <li>Used as vegetables</li> <li>Added to salads</li> <li>Used for preparation of tea: chicory tea</li> </ul>	<ul style="list-style-type: none"> <li>Stimulant</li> <li>Mild Laxative</li> <li>Use in Constipation, Anemia and Respiratory Disorder</li> <li>Potential effective in swellings and skin irritations</li> <li>Helps to decline symptoms of PMS or premenstrual syndrome             <ul style="list-style-type: none"> <li>Boosting capacity to absorb vivacious nutrients like calcium</li> <li>The juice is folk medicine for uterus cancer / tumors</li> </ul> </li> <li>Plant syrup, leaves, seeds are liver tonic and purifying medicine for infants             <ul style="list-style-type: none"> <li>Leaves for wound healing</li> <li>Flowers used in gallstones, gastroenteritis, sinus problems, cuts, bruises</li> </ul> </li> <li>Tea or decoction can be utilized as a depurative</li> <li>Leaves and seed used as a Blood purifier             <ul style="list-style-type: none"> <li>Roots are very effective in arteriosclerosis, Internal hemorrhage, digestive disorder, Renal disease and used as antiarthritis, antispasmodic,</li> </ul> </li> </ul>

					<p>etc</p> <ul style="list-style-type: none"> <li>• Milky juice or leaf juice used as a mild sedative</li> <li>• Roots and leaf part commonly used as a Diuretic, digestive, laxative, anti-inflammatory, liver tonic etc.</li> </ul>
7	<p><i>Plantago major</i></p> 	<ul style="list-style-type: none"> <li>• Common Name: <i>great plantain</i>, Lesan-ol-haml, Barhang</li> <li>• Family: Plantaginaceae</li> <li>• Chemical Constituents: flavonoids, polysaccharides, iridoid glycosides, terpenoids, lipids, and derivatives of caffeic acid</li> </ul>	<ul style="list-style-type: none"> <li>• Leaves</li> <li>• Seed</li> <li>• Root</li> </ul>	<ul style="list-style-type: none"> <li>• Saute in butter and garlic for Asthma, Ascites, Fever</li> <li>• Foodstuff with lentil, Plaster on Forehead in Epilepsy</li> <li>• Vaginal suppository, wash in urinary tract infection</li> <li>• Decoction as tea for Kidney's ducts obstruction, Hematuria, Ulcerative colitis, Dysentery</li> <li>• Eye ointment for eye infection</li> <li>• Gargle for stomatitis Mouth ulcers, Gingivitis, toothache</li> </ul>	<ul style="list-style-type: none"> <li>• Rich in Vit A,C And K Iron And Ca</li> <li>• used in treatment of various diseases such as constipation, coughs, wounds, infection, fever, bleeding and inflammation</li> <li>• Leaf tea effective for eyes sores, eye choroid diseases, day blindness, conjunctivitis etc.</li> <li>• Leaf juice used for toothache, mouth sores, halitosis, oral lesions, epistaxis, hemoptysis, loose teeth, gingivitis, earache, tonsillitis etc</li> <li>• Decoction/ tea used in treatment of asthma, hemoptysis, tuberculosis, lung and plural lesions</li> <li>• Dried seeds and leaf extract effective for hematemesis, dysentery, gastrointestinal bleeding /ulcers, hemorrhoids, dyspepsia</li> <li>• Mucilage commonly used for constipation</li> <li>• Used as Immune booster, Anti-hypercholesteremia, Anti-atherosclerosis and Hypoglycemic effect, Antinociceptive Effects, Antioxidant, Anti-infective, Antibiotic, and Anti-giardiasis, Anticancer etc</li> </ul>
8	<p><i>Stellaria media</i></p> 	<ul style="list-style-type: none"> <li>• Common Name: Alsine, chickweed, Chichory, chickenmeat, Adder's mouth, chick wittles, clucken wort, common passerina, satinflower, sercedili, skirt buttons, star chickweed, starweed, starwort, stitchwort, tongue grass, vogelmuur,</li> </ul>	<ul style="list-style-type: none"> <li>• Leaves</li> <li>• Stem</li> <li>• Root</li> </ul>	<ul style="list-style-type: none"> <li>• Used in salads</li> <li>• Used as a tea or tincture for physical fatigue and debilitation.</li> <li>• Tea/ decoction used as an emmenagogue, postpartum depurative, galactagogue</li> <li>• Infusion of Leaf used in bathing can help to reduce rheumatic pain</li> <li>• Eat as a salad</li> </ul>	<ul style="list-style-type: none"> <li>• Antioxidant</li> <li>• Fresh plant more effective in constipation, but excess dose can cause diarrhea, vomiting</li> <li>• Dried plant infusion effective in coughs, hoarseness etc.</li> <li>• Whole plant decoction effective for piles, sores, skin irritations, swelling on legs which show emollient, anti-inflammatory property, tissue repair activity</li> <li>• In scurvy plant juice is very effective as a rich source of vitamin</li> <li>• Folk medicine as a slimming agent</li> <li>• Whole plant utilized as Antirheumatic, Astringent, Carminative, Demulcent, Diuretic,</li> </ul>

		<p>white bird's wye and winterweed.</p> <ul style="list-style-type: none"> <li>• Family: Caryophyllaceae</li> <li>• Chemical Constituents: Ascorbic-acid, Beta-carotene, Calcium, Coumarins, Genistein, Gamma-linolenic-acid, Flavonoids, Hentriacontanol, Magnesium, Niacin, Oleic-acid, Potassium, Riboflavin, Rutin, Selenium, Triterpenoid saponins, Thiamin, and Zinc.</li> </ul>			<p>Emollient, Expectorant, Laxative, Refrigerant</p> <ul style="list-style-type: none"> <li>• For broken bones whole plant can be used as a plaster             <ul style="list-style-type: none"> <li>• Plant juice utilized for eye washing</li> </ul> </li> <li>• High in beta carotene (A), ascorbic acid (vitamin C), (GLA, the omega-6 fatty acid derivative), niacin, saponins, riboflavin (B2) thiamine (B1), gamma-linolenic acid iron, magnesium, potassium, calcium, zinc, manganese, phosphorus, sodium, selenium and silica.</li> </ul>
9	<p><i>Malva sylvestris</i></p> 	<ul style="list-style-type: none"> <li>• Common name: Mallow, Cheeseweed.</li> <li>• Family: Malvaceae</li> <li>• Chemical constituents: Vitamins [A,B,C,E], mucilage; inulin; flavonoids; phenols; fiber; essential fatty acids; magnesium; calcium; selenium; zinc; potassium.</li> </ul>	<ul style="list-style-type: none"> <li>• Leaves</li> <li>• Flowers</li> <li>• Seed pods</li> <li>• Roots</li> </ul>	<ul style="list-style-type: none"> <li>• Leaves added to tea, flowers used as a remedy for cough</li> <li>• Use in preparation of green smoothie, salads / soups</li> <li>• Tea can be prepared from dried leaves</li> </ul>	<ul style="list-style-type: none"> <li>• Rich source of Tannins, Vitamin A/C, Flavonoids, potassium, calcium, iron, selenium magnesium etc (beneficial in pregnancy).             <ul style="list-style-type: none"> <li>• Used To Treat Asthma, Bronchitis, Kidney stone, insomnia, chest congestion, respiratory illness, Diarrhea, dry cough, wounds,</li> </ul> </li> <li>• Show anti-inflammatory, diuretic, demulcent, emollient, laxative, expectorant, analgesic, Immunostimulant, Antibacteria, Antiaging, demulcent</li> </ul>
10	<p><i>Rumex crispus</i></p>	<ul style="list-style-type: none"> <li>• Common name: Curly dock, curled dock, garden patience, parell, patience herb, narrow dock, sour dock, curly</li> </ul>	<ul style="list-style-type: none"> <li>• Root</li> <li>• Bark</li> </ul>	<ul style="list-style-type: none"> <li>• Leaves, seeds are boiled with milk and flour             <ul style="list-style-type: none"> <li>• leaves can be utilized for preparation of salads, potherb soups etc.</li> </ul> </li> <li>• Seed powder can be</li> </ul>	<ul style="list-style-type: none"> <li>• Root part used to treat Cancer, Necrosis             <ul style="list-style-type: none"> <li>• The root is utilized as antiscorbutic, alterative, cholagogue, astringent, laxative depurative, and mildly tonic</li> </ul> </li> <li>• Root can be used for numerous skin diseases in form of dusting powder</li> </ul>


		dock, • Family: Polygonaceae • Chemical constituents: phenols and phenolic glycosides, flavonoids, saponins and cyanogenic glycosides, tannins, nitrogen compounds (amines, betalains, and alkaloids), terpenoids, stilben		used as flour or coffee substituent	<ul style="list-style-type: none"> <li>• Used internally in the treatment of constipation, piles, bleeding of the lungs</li> <li>• Root can be mashed and used as a poultice and salve, or dried</li> <li>• Seed are useful in diarrhea</li> <li>• Fresh roots used for cough</li> </ul>
12	<i>Alliaria petiolata</i>	Garlic mustard	Leaves, roots	Used in salads, added to spices	<ul style="list-style-type: none"> <li>• Contain Vit. A, C, E, Ca, Mg, Cu, Omega -3 Fatty Acids, Selenium, Fe</li> </ul>
13	<i>Sambucus nigra</i>	Elder flowers	Flowers, berries, roots	Berries are used to make jam, jelly, chutny, pontac sauce and flower heads to refreshing drinks	<ul style="list-style-type: none"> <li>• Used In Bronchitis, Cough, Fever</li> </ul>
14	<i>Trifolium pretens</i>	Red clover	Flowers	Added to salads, pan roast	<ul style="list-style-type: none"> <li>• Rich In Protein , Phyto Estrogen ,Beta Carotene, Bio Flavanoids, Vit C ,B</li> </ul>
15	<i>Urtica dioicia</i>	Stinging nettle	Leaves	Added to omelets, dips, teas, soups and pesto	<ul style="list-style-type: none"> <li>• Diuretic</li> <li>• Use in Kidney Stone</li> </ul>

Table 1:- List of collected wild Edible weeds in Aurangabad district[7-16]

## II. RESULTS DISCUSSION AND CONCLUSION

Ethnic plants play a significant part in the nutrition in rural and tribal communities. The wild edible plants or weeds are exceptional sources for various nutrients like vitamins, carbohydrates, proteins, fibers and minerals along with enormous therapeutic prospective so can be counted as a super food. The high diversity of wild edible plant species as shown in Table No.01 in Aurangabad District Maharashtra demonstrates that people in and around region reserves possess information about local vegetation that provides food. In the present survey collected valuable information about different wild edible weeds/plants used by rural people from Aurangabad District Maharashtra which reveals 15 plant species are with highest health benefits. The majority of found plant/ weed species are natives with a limited range of exotics. Promoting increased use of available biodiversity to improve dietary intake whether or not combined with income generation through wild edible plant commercialization and/or participatory domestication of priority wild edible plant, may be possible strategies to increase food and nutrition security in the region. Therefore, the present survey

information has certainly compile a important impact for the conservation of wild edible plant/weeds indigenous knowledge in and around Aurangabad District Maharashtra.

### ➤ Future Plan:

Preparation of economical Nutrient/food supplements with rich source of vitamins by utilization of found 15 Wild edible plants/ weeds in and around Aurangabad District Maharashtra.

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