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Diversity and Ethnobotanical Study of Wild Edible Vegetables in Chhatrapati Sambhajinagar District, Maharashtra, India

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Abstract: -

Wild edible vegetables constitute an important component of traditional food systems in rural India. These plants provide essential nutrients and contribute to food security, particularly during seasonal shortages. The present study aims to document the diversity and ethnobotanical uses of wild edible vegetables found in Chhatrapati Sambhajinagar district of Maharashtra. Field surveys were conducted in rural areas and surrounding natural habitats to collect information about plant species traditionally used as vegetables. Data were obtained through interviews with local inhabitants, farmers, shepherds, and elderly people possessing traditional ecological knowledge. The study recorded thirty species of wild edible vegetables belonging to twenty different plant families. Most of the recorded species are herbaceous plants whose leaves are commonly consumed as vegetables. Other edible parts include fruits, tubers, shoots, and young stems. These plants are prepared as cooked vegetables, chutneys, and seasonal dishes. Apart from their nutritional value, many of these species also possess medicinal properties. The study highlights the importance of documenting traditional knowledge related to wild edible plants and emphasizes the need for their conservation and sustainable utilization.

Keywords: Ethnobotany, wild edible plants, traditional knowledge, biodiversity, Marathwada.

Introduction: -

Wild edible plants have been used as food resources since ancient times and continue to play an important role in the diet of rural populations across the world. These plants grow naturally in forests, grasslands, agricultural

fields, and wastelands without deliberate cultivation. Many communities collect and consume wild vegetables as seasonal foods, which provide essential nutrients such as vitamins, minerals, proteins, and antioxidants. India is recognized as one of the richest countries in plant biodiversity and possesses a long tradition of ethnobotanical knowledge. Local communities have developed extensive knowledge about edible wild plants and their uses through generations of observation and experience. In many rural regions, wild vegetables supplement staple crops and contribute to dietary diversity (Jain, 1991& Kala,2007).

The state of Maharashtra contains diverse ecosystems including forests, scrublands, and agricultural landscapes that support numerous wild edible plant species. In the Marathwada region, particularly in Chhatrapati Sambhajinagar district, local people collect various seasonal leafy vegetables, fruits, and tubers from natural habitats. These plants are commonly consumed during the monsoon season when herbaceous vegetation grows abundantly. Despite their importance, traditional knowledge about wild edible vegetables is gradually declining due to urbanization, modernization, and changing food habits. Documentation of these plant species is therefore necessary for the preservation of indigenous knowledge and biodiversity. The present study aims to document the diversity and ethnobotanical uses of wild edible vegetables in Chhatrapati Sambhajinagar district of Maharashtra (Kala, 2007 and Patil, 2003).

Study Area: -

Chhatrapati Sambhajinagar district, formerly known as Aurangabad district, is located in the Marathwada region of Maharashtra, India. The district lies between approximately 19°30' and 20°40' north latitude and 74°40' and 76°40' east longitude. The region experiences a semi-arid climate characterized by hot summers, moderate monsoon rainfall, and mild winters. The natural vegetation of the district is mainly dry deciduous type with scattered forests, scrublands, agricultural lands, and grasslands. Major crops grown in the district include sorghum, pearl millet, soybean, cotton, and pulses. In addition to cultivated crops, rural communities frequently gather wild edible plants from surrounding natural habitats.

3. Materials and Methods

The ethnobotanical survey was carried out in several villages and surrounding natural areas of Chhatrapati Sambhajinagar district between 2022 and 2024. Repeated field visits were conducted during different seasons, particularly during the monsoon season when most wild vegetables are available (Singh & Arora, 1978 and Sharma, 2011). Information regarding wild edible vegetables was obtained through direct interaction with local residents including farmers, shepherds, traditional healers, and elderly villagers. Semi-structured interviews and informal discussions were conducted to gather details about: Local names of plants, Edible plant parts, Method of preparation, Season of availability, Traditional medicinal uses. Field observations were also carried out to verify the presence and habitat of plant species. Collected plant specimens were identified using standard botanical literature and regional floras. Scientific names and plant families were confirmed through herbarium references and botanical databases (Naik, 1998 and Yadav & Sardesai, 2002).

Results and Discussion: -

The present study documented 30 species of wild edible vegetables belonging to about 20 plant families. The majority of these plants are herbs that grow naturally in agricultural fields, wastelands, and forest margins. Leafy vegetables constitute the largest group among the recorded species. Leaves are widely consumed because they are easily available and rich in nutrients. Other edible parts include fruits, tubers, shoots, and stems.

Table 01: Wild Edible Vegetables Recorded in Chhatrapati Sambhajinagar District

Sr No	Scientific Name	Family	Local Name	Habit	Edible Part	Mode of Use
1	*Amaranthus viridis*	Amaranthaceae	Math bhaji	Herb	Leaves	Cooked vegetable
2	*Amaranthus spinosus*	Amaranthaceae	Kate Math	Herb	Leaves	Vegetable
3	*Chenopodium album*	Amaranthaceae	Bathua	Herb	Leaves	Vegetable
4	*Portulaca oleracea*	Portulacaceae	Ghol bhaji	Herb	Leaves	Cooked
5	*Celosia argentea*	Amaranthaceae	Kurdu	Herb	Leaves	Vegetable
6	*Alternanthera sessilis*	Amaranthaceae	Gudari bhaji	Herb	Leaves	Cooked
7	*Senna tora*	Fabaceae	Takla	Herb	Leaves	Vegetable
8	*Boerhavia diffusa*	Nyctaginaceae	Punarnava	Herb	Leaves	Vegetable
9	*Corchorus olitorius*	Malvaceae	Nalita bhaji	Herb	Leaves	Cooked
10	*Commelina benghalensis*	Commelinaceae	Kena bhaji	Herb	Leaves	Vegetable
11	*Trigonella foenum-graecum (wild)*	Fabaceae	Methi	Herb	Leaves	Vegetable
12	*Rumex vesicarius*	Polygonaceae	Chuka	Herb	Leaves	Sour vegetable
13	*Oxalis corniculata*	Oxalidaceae	Ambat chuka	Herb	Leaves	Chutney
14	*Basella alba*	Basellaceae	Mayalu	Climber	Leaves	Vegetable
15	*Coccinia grandis*	Cucurbitaceae	Tondli	Climber	Fruit	Vegetable
16	*Momordica dioica*	Cucurbitaceae	Kartoli	Climber	Fruit	Fried vegetable
17	*Momordica charantia*	Cucurbitaceae	Karli	Climber	Fruit	Vegetable
18	*Cucumis melo var. agrestis*	Cucurbitaceae	Ran kharbuja	Climber	Fruit	Raw/Cooked
19	*Lagenaria siceraria (wild)*	Cucurbitaceae	Dudhi	Climber	Fruit	Vegetable

20	*Colocasia esculenta*	Araceae	Alu	Herb	Leaves	Patodi
21	*Amorphophallus paeoniifolius*	Araceae	Suran	Herb	Tuber	Vegetable
22	*Dioscorea bulbifera*	Dioscoreaceae	Wild yam	Climber	Tuber	Cooked
23	*Dioscorea pentaphylla*	Dioscoreaceae	Ran suran	Climber	Tuber	Vegetable
24	*Typha angustifolia*	Typhaceae	Patera	Herb	Young shoots	Cooked
25	*Opuntia dillenii*	Cactaceae	Nagphani	Shrub	Fruit/Stem	Vegetable
26	*Leucas aspera*	Lamiaceae	Tumba	Herb	Leaves	Vegetable
27	*Hibiscus sabdariffa*	Malvaceae	Ambadi	Shrub	Leaves	Sour curry
28	*Ipomoea aquatica*	Convolvulaceae	Nal bhaji	Herb	Shoots	Vegetable
29	*Moringa concanensis*	Moringaceae	Shevga	Tree	Leaves/Pods	Vegetable
30	*Bambusa arundinacea*	Poaceae	Bamboo	Grass	Y. shoots	Cooked

Plant Habit and Life Forms: -

Among the recorded species, herbs constitute the majority of wild vegetables. Climbers and shrubs are less common, while a few tree species such as *Moringa concanensis* are also utilized.

The analysis of edible plant parts indicates that: Leaves – major edible part, Fruits – second, most common, Tubers and roots – important seasonal food, young shoots – consumed in a few species

Traditional Uses: -

Wild vegetables are commonly prepared as cooked curries, fried dishes, chutneys, or mixed with pulses and cereals. Some species such as *Hibiscus sabdariffa* and *Rumex vesicarius* are used for their sour taste in traditional dishes. Several plants also possess medicinal properties. For example: *Boerhavia diffusa* is traditionally used for kidney disorders, *Cassia tora* leaves are used for skin ailments and Portulaca oleracea is considered beneficial for digestive health.

Conclusion: -

The present study highlights the rich diversity of wild edible vegetables in Chhatrapati Sambhajinagar district of Maharashtra. Thirty plant species belonging to different families were recorded during the survey. These plants play an important role in traditional diets and provide valuable nutrients and medicinal benefits. However, rapid urbanization, habitat loss, and changing lifestyles threaten both plant diversity and indigenous knowledge. Therefore, documentation and conservation of wild edible plants are essential. Promotion of these traditional food resources may also contribute to nutritional security and sustainable utilization of biodiversity.

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