ASIAN JOURNAL OF PHARMACEUTICAL AND CLINICAL RESEARCH

INNOVARE ACADEMIC SCIENCES
Knowledge to Innovation

Vol 9, Issue 2, 2016

Online - 2455-3891
Print - 0974-2441

Research Article

DOCUMENTATION AND ETHNOBOTANICAL SURVEY OF WILD EDIBLE PLANTS FROM PALGHAR DISTRICT

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Received: 18 January 2016, Revised and Accepted: 26 January 2016

ABSTRACT

Objectives: (1) Documentation of Wild edible plants from Palghar District through discussion with rural people as well as continuously field visits. (2) To document medicinal value of documented wild edible plants trough discussion with local medicine man and Vaidus.

Methods: The ethnobotanical survey were carried out in rural areas of Palghar district from June 2015 to December 2015. The data occurred through discussions and interviews with experienced persons and traditional healers. The data on wild edible plants were collected using preparation of questionnaire in local language and group discussions. Voucher specimens were collected during walk with informants. The collected plants were identified by using standard floras.

Results: Some wild edible plants also have medicinal properties. Such dual roles of wild plants are common in the rural areas. The study in the Palghar district revealed that about 40 varieties of plant species of which leaves, flowers, inflorescence, tubers, bulbils and fruits are mainly used for consumption. The total 40 species of wild edible plants are collected and stored with detailed information regarding scientific name, common name, purpose of uses for future reference and study depicted in (Table 1). Out of which 12 species belongs to herbs, 9 species belongs to trees, 12 belong to shrub and 7 are climbers.

Conclusion: Above plant have dual significance firstly they are promising future food and secondly these medicinal plants can have some active constituents for future phytochemical analysis. Present work documented 40 wild edible plant species and gives us information on food habits of rural people of Palghar district. Out of these most of the plants have medicinal values. Further investigation on their phytochemical and nutraceutical studies may provide better nutritional and medicinal sources for future.

Keyword: Wild edible plant, Palghar district, Ethnobotany.

INTRODUCTION

Wild plants make an important contribution to the life of rural communities. Wild edible plants are those with one or more parts that can be used for food if gathered at the appropriate stage of growth and properly prepared. Tribal people fulfill their nutritional requirement from wild resources. They got knowledge of wild edible plants traditionally. This traditional knowledge is useful to develop new food sources [1]. Food plants serve as alternatives to staple food during periods of food deficit are a valuable supplement for a nutritionally balanced diet also

Table 1: List of some wild edible plants of Palghar district and their ethnobotanical information

Name of plant species, Family, and Vernacular name	Food value	Medicinal uses
Edible plant part-Leaves		
Abrus precatorius L. Family- Fabaceae Vernacular name - Gunj.	Leaves edible	Leaf juice mixed with castor oil and applied externally for burning of the skin
Alternanthera sessilis (L.) R. Br. ex DC. Family - Amaranthaceae Vernacular name - Reshim-kata	Leaves used as a vegetable	Leaf juice used in eye diseases
Amaranthus spinosus L. Family - Amaranthaceae Vernacular name - Kate-math.	Leaves used as vegetables	Leaves powder mix with honey is used as a cooling application. Root powder used as an antidote against snakebite
Amaranthus viridis L. Family – Amaranthaceae Vernacular name - Math.	Leaves used as a vegetable	Leaf paste applied externally as an antidote against snakebite
Basella alba L. Family – Basellaceae Vernacular name - Mayalu.	Leaves used as vegetables	Leaves pulp is applied to boils, ulcers. Leaf juice is mixed with butter and is used for burns. The mucilaginous liquid obtained from the leaves and tender stalks of plants is a popular remedy for headaches
Bauhinia variegata L. Family – Caesalpiniaceae Vernacular name - Kanchan.	Leaves and flower buds are edible	Decoction of dried buds is gives orally for piles and dysentery

(Cond..)

Table 1: ***(Continued...)***

Name of plant species, Family, and Vernacular name	Food value	Medicinal uses
Boerhavia repens L. var. diffusa (L.) Hook. Family - Nyctaginaceae Vernacular name - Punarnava	Leaves are edible	Juice of leaves is useful in jaundice
Calophyllum apetalum Willd. Family – Clusiaceae Vernacular name - Bobi, Irai.	Leaves used as vegetables	The leaves are soaked in water are applied to inflamed eyes
Cardiospermum halicacabum L. Family - Sapindaceae Vernacular name - Kapalphodi.	Leaves eaten as a vegetable	Decoction of leaves and root is given orally for rheumatism and piles
Cassia tora L. Family – Caesalpinaceae Vernacular name - Takala	Leaves used as vegetables	Leaves and seeds constitute a valuable remedy in skin diseases. Seed powder mix with cow urine make paste and used externally on the tumor
Celosia argentia L. Family – Amaranthaceae Vernacular name - Kurdu	Leaves used as vegetables	Root ash is used as an antidote for snake bite. Root powder smeared with honey and applied for the skin infection
Chenopodium album L. Family - Chenopodiaceae Vernacular name - Chakwat	Leaves used as vegetables	Oil obtained by steam distilling seeds with seam or water is used to expel hookworms
Clerodendrum serratum (L.) Moon. Family - Verbenaceae Vernacular name - Bharangi	Leaves used as a vegetable	Leaf juice is laxative
Commelina benghalensis L. Family – Commelinaceae Vernacular name - Kena	Leaves used as vegetable	Leaf powder mix with warm water and gives orally to treat diarrhea
Corchorus capsularis L. Family - Tiliaceae Vernacular name - Jute	Young leaves used as a vegetable	Infusion of dried leaves used to cure dysentery
Hibiscus sabdariffa L. Family - Malvaceae Vernacular name - Lal-ambadi	Leaves used as a vegetable	Leaves used as an emollient
Moringa oleifera Lam. Family - Moringaceae Vernacular name - Shevga.	Leaves and green pods used as a vegetable	Leaf paste gives orally as an antidote in dog bite
Murraya koenigii (L.) Spreng. Family- Rutaceae Vernacular name - Kadipatta	Leaves used in curries	Tender leaves are eaten raw for cure dysentery
Oxalis corniculata L. Family- Oxalidaceae Vernacular name - Ambushi	Leaves and seeds are edible	Leaves are useful in fevers and biliousness
Pedalium murex L. Family- Pedaliaceae Vernacular name - Motha-gokharu.	Leaves eaten as a vegetable	Powder of leaves given with milk in gonorrhea
Edible plant part - flowers		
Amorphophallus commutatus (Schott) Engl. Family - Araceae Vernacular name - Sheval	The peduncle and inflorescence are edible	Tubers are used in boils and ophthalmia
Bauhinia variegata L. Family - Caesalpinaceae Vernacular name - Kanchan	Flowers used as vegetables	Dried buds useful in diarrhea and worms as well as piles and dysentery
Bombax ceiba L. Family - Bombacaceae Vernacular name - Katesavar	Flowers used as vegetables	Mixture of dry flowers, poppy seeds, goat milk, and sugar was given orally 3 times in a day in hemorrhoids
Cassia auriculata L. Family - Caesalpinaceae Vernacular name - Tarwad	Flowers used as vegetables	Flower powder mix with honey or decoction given in urine diseases and diabetes
Cassia fistula L. Family - Caesalpinaceae Vernacular name - Bahava	Flowers used as vegetables	The pulp of pod is a mild laxative, safe for children and pregnant women. Flowers in decoction are given in stomach affection
Madhuca longifolia (Koen.) Mac. Family - Sapotaceae Vernacular name - Moha	Flowers used as vegetables	Decoction of flowers is useful in cough
Woodfordia fruticosa (L.) Kurz Family - Lythraceae Vernacular name - Dhayati	Flowers are edible	Flower powder mixed with curd and gives orally for curing dysentery

(Cond..)

Table 1: ***(Continued...)***

Name of plant species, Family, and Vernacular name	Food value	Medicinal uses
Edible plant part - tuber and Bulbils		
Amorphophallus commutatus (Schott) Engl. in Dc. Family - Araceae Vernacular name - Suran	Rhizomes are used as vegetable	Rhizome used in piles. Boiled rhizome is useful in mouth diseases
Asparagus racemosus Willd. Var. Javanica Family - Liliaceae Vernacular name - Shatavari	Tuber eaten as vegetables	The root is boiled in milk and milk is administered to relive bilious dyspepsia and diarrhea and promote appetite
Curculigo orchioides Gaertn. Family - Hypoxidaceae Vernacular name - Kali-musali.	Tuber eaten as vegetables	Tubers cut and shed dry in that add an equal amount of sugar and one glass milk mix well to make thick mucilage, this mixture is used in asthma, jaundice, and diarrhea
Dioscorea alata L. Family - Dioscoriaceae Vernacular name - Dukkarkand	Tubers & bulbils used as vegetables	Tuber powder used is useful in piles, burning, and eye diseases
Dioscorea bulbifera L. Family - Dioscoreaceae Vernacular name - Dukkarkand	Tubers used as vegetables	Tuber powder mix with butter is given to check diarrhea. The roasted tuber mix with ghee and sugar candy is reputed remedy for piles
Dioscorea oppositifolia L. Family - Dioscoriaceae Vernacular name – Dukkar-Paspoli.	Tubers used as vegetables	-
Nelumbo nucifera Gaertn. Family - Nelumbonaceae. Vernacular name - Kamal, Kankali.	Rhizomes are edible	-
Nymphaea nouchali Burm.f. Family - Nymphaeaceae Vernacular name - Kamal	Tuberous rhizomes and peduncles eaten as vegetables	Raw tubers are used as emetic and it beneficial in pitta
Nymphaea pubescens Willd. Family - Nymphaeaceae Vernacular name - Kamal	Tuberous rhizomes and peduncles eaten as vegetables	Leaves are used in ophthalmia
Edible plant part - fruits		
Buchanania cochinchinensis (Lour.) Almeida Family - Anacardaceae Vernacular name - Char	Fruits are edible	The fruit is sweet and laxative. The seed is palatable and nutritious when roasted
Canavalia gladiata (Jacq) Dc. Family - Papilionaceae Vernacular name - Abai, Ghevada	Fruits are used in chutneys and pickles	The root is ground in cow urine and administered orally to cure liver diseases
Aegle marmelos (L.) Corr. Family - Rutaceae Vernacular name - Bel	Fruit pulp is edible	Sherbet or syrup of fruit made with water. It is laxative and cures dyspepsia

one of the primary alternative sources of income for many resource-poor communities and the source of species for domestication [2]. In this article, we contribute to the literature on the relation between knowledge and uses of plants. Previous researchers have identified gaps between knowledge and uses of plants by either using ethnographic and quantitative methods but with data gathered at the group level [3-6]. This research adds to this literature by comparing how individual knowledge of wild and semi-cultivated plants correlates with individual uses of plants.

Study area

Palghar district is situated in the northern part of Maharashtra State in western India. On the 1st August 2014, the Maharashtra State government announced the formation of the 36th district of Maharashtra when a new Palghar district was carved out of the old Thane district. It comprised 8 taluks, namely, Palghar, Vada, Vikramgad, Jawhar, Mokhada, Dahanu, Talasari, and Vasai-Virar. The district is bounded by Thane and Nashik districts on the east and northeast simultaneously and by Valsad district of Gujarat state and Union Territory of Dadra and Nagar Haveli on the north. The Arabian Sea forms the western boundary while Vasai-Virar is part of Mumbai Metropolitan Region. Main tribal communities present in Palghar district are Warli, Malhar Koli, Koli, Katkari, etc.

METHODS

The ethnobotanical survey was carried out in rural areas of Palghar district from June 2015 to December 2015. The data occurred through discussions and interviews with experienced persons and traditional healers. The data on wild edible plants were collected using the preparation of questionnaire in the local language and group discussions. Voucher specimens were collected during a walk with informants. The collected plants were identified by standard floras [7-11].

RESULTS AND DISCUSSION

Some wild edible plants also have medicinal properties. Such dual roles of wild plants are common in the rural areas [12]. The study in the Palghar district revealed that about 40 varieties of plant species of which leaves, flowers, inflorescence, tubers, bulbils, and fruits are mainly used for consumption. The total 40 species of wild edible plants are collected and stored with detailed information regarding scientific name, common name, the purpose of uses for future reference and study depicted in Table 1. Out of which 12 species belongs to herbs, 9 species belongs to trees, 12 belong to shrub, and 7 are climbers.

CONCLUSION

Above plants have dual significance; first, they are promising future food; and second, these medicinal plants can have some active constituents for future phytochemical analysis. Present work documented 40 wild edible plant species and gives us information on food habits of rural people of Palghar district. Out of these, most of the plants have medicinal values. Further investigation on their phytochemical and nutraceutical studies may provide better nutritional and medicinal sources for future.

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