

Ethnobotanical Study in Valsad District of Gujarat

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ABSTRACT

An attempt has been made to compile the ethnobotanical utilization of 41 species of plants belonging to 38 genera under 29 families in day to day life of different area such as Dharampur, Kaparada, Pardi and Umergam in Valsad district of Gujarat state. The traditional Knowledge regarding the use of these plants is widely applied by these ethnic groups.

Key words: Ethnobotany, Valsad district, Gujarat

INTRODUCTION

India has over 38 million tribal inhabiting varied geographical regions and climatic zones. The total number of tribal communities is around 550. Within the country, the states of Madhya Pradesh, Orissa and Rajasthan are three dominant pockets of tribal population. The state of Gujarat ranks fourth in India with respect to tribal population. The forest areas all along the eastern boundary of Gujarat state are predominantly inhabited by a tribal population that counts to *ca* 14.0% of the total population of the state, as against the all India percentage of 6.81%.

The term Ethnobotany was first defined by Harshberger (1896). Since then various workers have expressed their views regarding the importance and concept of Ethnobotany. Schultes (1962), defined it as the study of relationship that exists between the people of primitive societies and their surrounding environment. Jain (1981), defined it to be the relationship between human society and plants.

With the process of civilization and urbanization rapidly advancing, there is an imminent danger of losing forever these valued treasures of information. Due to the large scale developmental activities in the study area, there has been of late lot of urban influence on the local population. The communication systems, transport and educational facilities are also gradually improving. The natural consequence of all these developmentally would be a partial or total loss of botanical folk-lore. "What does interest us academically and practically is how to salvage some of the medico-botanical lore before it shall have been forever entombed with the culture that gave it the birth" (Schultes, 1960). It is therefore desirable that a joint venture by ethnologists, botanists and chemists be made to

explore the vast lore available with these primitive societies.

In India significant work has so far been done in this direction. However, mention may be made of the works of Jain (1991), Sinha (1996) and Singh and Pandey (1998). These contributions can be considered as a landmark in the contribution of Indian taxonomists towards ethno botanical investigations. Although significant amount of ethnobotanical study in many other parts of South Gujarat has been conducted by various workers (Shah, 1978; Contractor, 1986; Bhatt, 1987).

STUDY AREA

Valsad is a district town situated south of Tapi River on 72°50' E and 20° 35'N in the southern part of the Gujarat state about 194 Km North of Mumbai on Ahmedabad-Mumbai broad gauge railway line. About 3 Km West of Valsad town is an Arabian Sea and in the east there is Ahmedabad-Mumbai National Highway. Geographically Valsad belongs the western coastland of the Deccan peninsula. The area is traversed by Daman Ganga, Purna, Auranga, Kaveri and Ambica rivers and several small tributaries. The area consists of hills and plain lands. The area is a plain land about 12 km (a.m.s.l.).

The soil is several feet deep and rich in organic matter. In the plains where black cotton soil is noticed, the drainage is poor and the soil deeply cracks in the dry seasons. The average depth of water from ground level is about 20-30 feet. The climate of this area is of subtropical type. The average annual rainfall of last five years in the area is 1785.4 mm. The pH of the soil range between 7.10 – 8.30.

MATERIAL AND METHODS

The present study was conducted during 2008. Regular bimonthly visits were made to four different places of Valsad district. The ethnobotanical information was gathered through interviews and discussion with village headmen, local traditional healers and elder villagers of different localities of the district. Data were reported on the plant parts used, local name, place of collection, process of preparation, mode of administration and dosage. Voucher specimens were collected for making herbarium sheets by standard method along with the information on uses, vernacular names, family, etc. The voucher specimens have been deposited in the herbarium of Biology Department, B.K.M. Science College, Valsad.

ENUMERATION

From interactions with various local informants of ethnic communities, forty one species of plants were collected from the immediate vicinity of the

communities which use them in a myriad of ways. Botanical names are arranged alphabetically, followed by family name in parenthesis, vernacular name, field number and mode of use.

Abrus precatorius Linn. (Fabaceae) ABT 0018.

Locally called as 'Chanothi'. The paste of the root applied on wounds and sores of cattle. Seed paste mixed with goat's milk is administered for menstrual disorders. Seed paste is applied for curing baldness. The roots are crushed and mixed with water and from this water 2-3 drops is administered through nostrils as a remedy of migraine. The fruits are crushed to powder and mixed with water and store in copper vessels overnight applied externally on skin diseases.

Achyranthes aspera Linn. (Amaranthaceae) ABT 0311.

Locally called as 'Aghedo'. The roots are used as oxytocic. The plantation of the plant near human settlements keeps away the scorpion. Roots are also administered as a remedy for curing piles. Ashes are used against deafness.

Alangium salyifolium (L. f.) Wang. (Alangiaceae) ABT 0963.

Locally called as 'Ankol'. Root bark is used as an antidote for poisons. It is also used for leprosy and syphilis. The decoction of the bark is administered in the treatment for hydrophobia. Ripe fruits are used to increase vitality and also to cure tuberculosis.

Albizia lebbek (L.) Bth. (Mimosaceae) ABT 0284.

Locally called as 'Siris'. The bark decoction is used in toothache. The seeds are powdered and mix with turmeric to remove local swellings and inflammations. The bark is a potential remedy for eczematous swellings.

Argemone mexicana Linn. (Papaveraceae) ABT 0083.

Locally called as 'Darudi'. The juice of the whole plant is utilized in the treatment of syphilis, gonorrhoea and leprosy. The seed oil is administered internally in asthma. The seeds are dried and roasted made to a powder mixed with coconut oil is used externally in curing skin diseases.

Argyrea nervosa (Burm. f.) Boj. (Convolvulaceae) ABT 728.

Locally called as 'Samudrasosh'. Leaves are used to cure skin inflammations and local bunts. It is believed that those who want male child should use the roots of *Argyrea nervosa*. Take the roots, make its powder and mix it with ghee from

cow's milk. Boil this ghee for two to three times. Allow it to cool. Give one spoon of this *ghee* with milk to male who wants male child through him from his wife.

Asparagus racemosus Willd. var. *javanicus* Kunth. (Baker) (Liliaceae) ABT 0965.

Locally called as 'Shatavari'. Locally used as a general tonic. Used as anti-spasmodic agent. Also used to cure spermatorrhoea.

Bombax ceiba Linn. (Bombacaceae) ABT 0975.

Locally called as 'Shimlo'. The bark spines are powdered and mixed with milk to remove black spots locally called as "Kalo kodh". The bark mixed with camphor is used to cure sorefoot.

Butea monosperma (Lamk.) Taub. (Fabaceae) ABT 0966.

Locally called as 'Palas'. The fresh young leaf is mixed with cow's milk. It is given to pregnant lady for healthy child. The decoction of the flowers is a potential remedy for cancer provided in early stages of malignant growth.

Calotropis procera (Ait.) R. Br. (Asclepiadaceae) ABT 0077.

Locally called as 'Ankado'. The twig of the plant is stirred in 400 gms boiled milk until it is totally coagulated. The entire formulation is a very potential anti-malarial drug. The tender leaves are also utilized as a remedy for malaria.

Cassia auriculata Linn. (Caesalpiniaceae) ABT 0821.

Locally called as 'Aval'. Flower buds are used to cure diabetes. The leaf paste is utilized for curing burnts. The flowers are administered to check periodical menstrual flow.

Cassia fistula L. (Caesalpiniaceae) ABT 0007.

Locally called as 'Garmalo'. Predominantly used as timber for beams, roof, platform, doors, windows of houses.

Cassia tora Linn. (Caesalpiniaceae) ABT 0220.

Locally called as 'Kunvadio'. Leaves and seeds are used to cure skin diseases especially eczema. Tender leaves are used as vegetables.

Catunaregum spinosa (Thumb.) Tirveng. (Rubiaceae) ABT 0969.

Locally called as 'Mindhal'. The entire plant powder is used to remove

pimples. The fumes or the steam of the plant when applied to uterine helps in early and easy delivery.

Ceropegia bulbosa Roxb. (Asclepiadaceae) ABT 0310

Locally called as "Patan Tumbdi". The tubers are used as tonic and eaten cooked.

Cissampelos pareira Linn. (Menispermaceae) ABT 0198.

Locally called as 'Pahadvel'. Leaf paste is given externally as anthelmintic and in acute stomachache. Roots are considered as diuretic.

Crataeva magna (Lour.) DC. (Capparaceae) ABT 0111.

Locally called as 'Vayvarno'. The extract of the stem bark is used to cure gastric trouble.

Enicostemma littorale (Lamk) Reyna. (Gentianaceae) ABT 0121.

Locally called as 'Kadvinai'. The juice of the leaves is used against all types of fever. The leaves mixed with dried nutmeg are a good laxative. It is given especially to the young childrens for curing worms.

Euphorbia hirta Linn. (Euphorbiaceae) ABT 0621.

Locally called as 'Dudheli'. The extract of the young leaves is used for dysentery and colic. Latex is applied externally on cuts and wounds. The leaves mixed with water and warm gently is a good remedy for renal stones.

Ficus benghalensis Casp. (Moraceae) ABT 0712.

Locally called as 'Vad'. One of the sacred plants of the area. Latex is applied on cuts and wounds and also in blisters.

Ficus racemosa Linn. (Moraceae) ABT 0714.

Locally called as 'Umbaro'. Tender fruits are used or rather cooked as vegetables. Latex from the fruit mixed with turmeric is given to cure diabetes. Root bark crushed with turmeric is used orally for diarrhoea.

Flacourtia indica (Burm. f) Merr. (Flacourtiaceae) ABT 0064.

Locally called as 'Gargugal'. Juice of the fresh leaves is used to cure jaundice. Fruits edible.

Gmelina arborea Roxb. (Verbenaceae) ABT 0188.

Locally called as "Sevan". The timber is highly valued for making artifacts.

Helicteres isora Linn. (Sterculiaceae) ABT 0972.

Locally called as 'Mardasingi'. The bark fiber is used for making cordages. The decoction of the fruit is used to cure stomach disorders. Leaf paste is applied on wounds.

Hemidesmus indicus (L.) R. Br. (Periplocaceae) ABT 0797.

Locally called as 'Anantmul'. The roots are chewed in toothache. The roots are also used to relieve muscular pains. Ethno veterinary uses are mainly confined to clean wounds in cattles. (External application).

Holarrhena pubescens (Buch -Ham.) Wall. (Apocynaceae) ABT 0091.

Locally called as 'Indrajav'. Highly useful medicine against dysentery. The roasted seeds are used to cure diarrhea and colic.

Lepidium sativum Linn. (Cruciferae) ABT 0265.

Locally called as 'Aselio' or 'Asadhio'. Seeds are used in seminal debility, leucorrhoea, rheumatism and lumbago. Seeds are also considered as blood purifier.

Maerua oblongifolia (Forsk.) A. Rich. (Capparaceae) ABT 0049.

Locally called as 'Hemkand'. Roots are used as vegetable. Also as stimulant. The root extract is administered in convulsions and epilepsy.

Mangifera indica Linn. (Anacardiaceae) ABT 0317.

Locally called as 'Ambo'. The flowers are applied against scorpion bite.

Mucuna pruriens (L.) DC. (Fabaceae) ABT 0013.

Locally called as 'Kavanch'. Seeds are potential remedy for increasing sexual potential. Also used in parkinsonism.

Oroxylum indicum (L.) Vent (Bignoniaceae) ABT 1293.

Locally called as 'Tetu'. The bark is boiled and applied on cuts and wounds. The stem bark mixed with egg yolk is made into bandages and applied external on bone fractures.

Pongamia pinnata (L.) Pierre. (Fabaceae) ABT 0225.

Locally called as 'Karanj'. The oil extracted from leaves is used to cure

skin diseases and tender twigs are chewed for the cure of pyrrhoea.

Sapindus laurifolius Vahl. (Sapindaceae) ABT 1081.

Locally called as 'Aritha'. The entire plant is useful in feminine diseases like menstrual disorders and for abortion. The smoke of the leaves is to be inhaled as antidote against scorpion bite.

Solanum surratense Burm. f. (Solanaceae) ABT 0228.

Locally called as 'Bhoiringni'. The smoke of the seeds when burnt is used as remedy for dental problems. The leaf juice is administered in poultry diseases.

Sterculia urens Roxb. (Sterculiaceae) ABT 1027.

Locally called as 'Kadayo'. One of the major NTFP of the area. Yields a gum called as "Kadaya gum". The bark gum is used to cure gonorrhoea and syphilis.

Tacca leontipetaloides (L.) O. Kuntze. (Taccaceae) ABT 0199.

Locally called as 'Sardartad'. The rhizomes are aphrodisiac. Also taken internally in leprosy.

Terminalia arjuna (Roxb.) W. & A. (Combretaceae) ABT 0153.

Locally called as 'Safed Sadad' or "Arjun Sadad". The bark of the tree crushed with water, which is stored in copper vessel overnight and taken in early morning with empty stomach is useful in heart attack.

Tinospora cordifolia (Willd.) Miers ex Hk. f. & Th. (Menispermaceae) ABT 0140.

Locally called as 'Galo'. The whole plant is utilized as a general tonic. The juice of the leaves and roots are administered in the treatment of rheumatism, stomach disorders and muscular pains.

Vernonia cineria (L.) Less. (Asteraceae) ABT 0592.

Locally called as 'Sahadevi'. The leaf juice is administered in the treatment of kidney stones.

Vitex negundo (Verbenaceae) ABT 0067.

Locally called as 'Nagod'. The leaves are used during bath as a remedy to overcome general body weakness and fatigue. Useful in curing rheumatism. The roots are applied during teething period in children. The leaf juice is applied in

inflammation of testis.

Wrightia tinctoria (Apocynaceae) ABT 0380.

Locally called as 'Dudhkadi'. The plant is used as tonic while seeds are used in seminal weakness. Bark, stem and root are used in snake bites.

RESULTS AND DISCUSSION

The present study deals with 41 species of plants belonging to 38 genera, which are being used in traditional medicine of the Valsad district. The data presented here have been collected from tribal medicine men and local foresters who yield considerable influence in these communities. Tribal were always reluctant to part with this information as it was considered to be a secret treasure. Worthwhile information therefore could be collected only after intimate contacts and lot of persuasion. Only a proper scrutiny of this information by a team of specialists in different disciplines would ultimately decide whether it would be significant enough to be of any commercial value. The present areas selected for study has moderate population of tribal communities. The major tribes found in Valsad district are Bhils, Kharva, Nayakas, Dhodiya and Halpati. Due to the constant companionship with surrounding environs tribal have by the trial and error methods gathered fairly good information about the utility of plants. This knowledge is well preserved and kept a secret to be passed on from generation to generation. Tribal have implicit faith in plants and their remedial properties. Their medicine men locally called as "Bhagats" use plants or plant products for curing diseases and ascribe magical healing powers to many of them. Certain plants are used as sources of food especially during famine. The area of study is rich in floral diversity with strong traditions of ethnobotanical practices existing among the ethnic communities. Therefore, there is a strong need to take necessary steps for the conservation and sustainable uses of these plants, which are the source of food, herbal medicine and a variety of materials for daily use of the ethnic communities.

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