

Economical uses of plants by tribals from Valsad district of Gujarat, India

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India has over 38 million tribal inhabiting varied geographical regions and climatic zones. The total number of tribal communities is around 550 (Jain, 2001; Desai, 2002). 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 %. (Census, 2001). An attempt has been made to compile the ethnobotanical utilization of 39 species of plants belonging to 37 genera 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.

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; 1999; 2002), Maheshwari (2002), Pal and Jain (1998), Pushpangadan (1995), 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.

The present work was the outcome of the first hand ethnobotanical survey conducted during 2007 to 2008. Data is based on personal contact and observations and interviews with local tribes of the district. 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.

This paper presents 39 plants and its economical uses from the study area.

Abrus precatorius Linn. (*Fabaceae*):

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*):

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

Alangium salvifolium (L. f.) Wang. (*Alangiaceae*):

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 lebeck (L.) Bth. (*Mimosaceae*):

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):**

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.

***Argyreia nervosa* (Burm. f.) Boj. (Convolvulaceae):**

Locally called as “Samudrasosh”. Leaves are used to cure skin inflammations and local bunts. The roots are nervine tonic.

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

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

***Bombax ceiba* Linn. (Bombacaceae):**

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):**

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. (Asclepiadiaceae):**

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. (Caesalpiaceae):**

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 tora* Linn. (Caesalpiaceae):**

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):**

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. (Asclepiadiaceae):**

The tubers are used as tonic and eaten cooked.

***Cissampelos pareira* Linn. (Menispermaceae):**

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):**

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

***Enicostemma littorale* (Lamk) Reyna. (Gentianaceae):**

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):**

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):**

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):**

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):**

Juice of the fresh leaves is used to cure jaundice. Fruits edible.

***Helicteres isora* Linn. (Sterculiaceae):**

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):**

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):**

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

***Lepidium sativum* Linn. (Cruciferae):**

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):**

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):**

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

***Mucuna pruriens* (L.) DC. (Fabaceae):**

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

***Oroxylum indicum* (L.) Vent (Bignoniaceae):**

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):**

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. (Sapnidaceae):**

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.

***Sterculia urens* Roxb. (Sterculiaceae):**

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.

***Solanum surratense* Burm. f. (Solanaceae):**

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.

***Tacca leontipetaloides* (L.) O. Kuntze. (Taccaceae):**

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

***Terminalia arjuna* (Roxb.) W. and A. (Combretaceae):**

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. and Th. (Menispermaceae):**

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):**

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

***Vitex negundo* (Verbenaceae):**

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):**

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.

The present study deals with 39 species of plants belonging to 37 genera, which are being used in traditional medicine of the Valsad district. The data presented here have been collected mostly 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. These uses of plants are local in the strictest sense. *i.e. sensu strictu*. At times different uses are attributed to the same plants by different tribal in the same area.

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