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Traditional Uses of Plants as Cooling Agents by the Tribal and Traditional Communities of Dang Region in Rajasthan, India

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Abstract

The Dang region of Rajasthan is rich in biodiversity. Tribal and traditional communities have rich knowledge about ethnobotanical plants of their surroundings. The present paper deals with 36 plant species used as cooling agents during summers.

Key words: Traditional, cooling, Dang, Tribal.

Introduction

The tribal population in India is quite considerable, i. e. 53 million, forming 8% of country's total population. Over 550 ethnic groups are found in different geographical habitats. (Anonymous, 1994). Rajasthan has about 70.97 lac tribal population (fifth rank in India) forming 12.5%of state's total population. Twelve tribes occur in Rajasthan, of which five are demographically important viz. Bhil, Damor, Garasia, Meena and Saharia. The Dang region comprising of Karauli, Sawai Madhopur, and Dholpur districts is rich in forests as well as in tribal and traditional communities. The main tribe of Dang is Meena, while traditional communities are Gurjar, Mali, Chamar, Jogi etc. Meena represents about 50% population of tribals in the state. Plants are the bases of tribal lives from birth to death. This inter relationship has evolved over generations of experiences and practices.

The general climatic condition of the region is dry, except a short duration of rainy season. December to February is cold season, March to June summer, July to September rainy season and October to November is autumn season. The average annual rainfall of the study areas is 689 mm. The average maximum and minimum temperatures remain 41° and 25°C respectively during summer. Relative humidity is generally over 60% during the rainy season. The rivers Chambal, Banas, Morel and Gambhir with their tributaries pass through the area.

The forest falls under Tropical Dry Deciduous Forests. The forests cover varies greatly in composition and quality. *Anogeissus pendula* is the predominant species distributed almost throughout the area, forms almost pure stands at certain places.

Methodology

For documentation of the available medicinal flora, ethnobotanical surveys were conducted in 2005-2007, randomly selected villages following the procedure as described by Jain (1967,1987,1989), Jain and Mudgal (1999), Martin (1994), Joshi (1994) and Singh and Pandey (1998). Most of surveys were carried out in six tehsils of Karauli, Sawai Madhopur and Dholpur districts of Rajasthan and their surrounding areas. The data were collected by interviews, observations and participation. In surveys, besides tribal people and traditional communities, their medicine men and women, local *Vaids, Bhopas*, *Gotheeyas* etc. were interviewed. Interviews were taken individually and in groups. During fieldwork, plant specimens and materials including propagules (corms, tubers, bulbils, culms, etc.) were collected for herbarium specimens.

Result and Discussion

Tribal and traditional communities are using 36 plant species as cooling agents during summers. The various mode of administration are as follows:

1. Plant part made edible either by powdering and mixing with other ingredients as food.

2. Raw plants/parts/products.
3. Extract by crushing or pounding fresh drug or slicing it.
4. Juice/ simple rubbing of plant part.
5. Cooking as vegetables, laddooes, halwa etc.
6. Paste.
7. Oils.

Most plants used by tribal and traditional communities are easily available near hut or in village. It is easy to fetch them. Generally plants are used in a crushed form. This study established that many different parts of the plant species are used as medicine e.g. root, stem, leaf, seeds, flowers, gum, whole plant etc. The most commonly used plant part is leaf and seeds. Amongst 36 plant species leaves of 10 species, whole plant and seeds of 7 species, roots of 5 species are used to calm body heat.

Gum of 3 species eaten raw or with water. Root juice of 3 species, fruit powder or pulps of 4 species are used as cooling agents. Tuber of 1species eaten and oil applied to cure heatstroke.

Enumeration

Plants are described alphabetically with their local name followed by family and their mode of use:

Acacia nilotica (L.) Bamool, Bamoor

Gum eaten raw. Leaf paste mixed in curd is taken. Root juice is mixed with sugar candy, cardamom, *vanshlochan* and roots of *Chlorophytum* and taken by females.

Achyranthes aspera L. Onga, Chirchita

The paste or powder of seeds is taken orally.

Aegle marmelos (L.) Corr. Bel

Fruit pulp or powder is eaten directly or mixed in curd or water and taken.

Amorphophallus commutatus Engler, Sukerkand

Tuber is eaten raw.

Benincasa hispida (Thumb.) Cong. Petha

A cut is made into fruit and filled with wheat (grains), after 2-3days fruit is cut into pieces and dried with grains. These dried pieces and grains ground and roasted in ghee, mixed with sugar, made into laddooes and eaten in summers. It is very effective against body heat and prevents heatstroke.

Boerhavia diffusa L. Santhi

Root pounded with seeds of black pepper and candy, is taken orally during summers.

Bombax ceiba L Semra

Root pounded with of *Chlorophytum tuberosum, Capparis sepiaria* and fruits of *Pedalium murex* are taken with water as tonic.

Butea monosperma (Lam.) Taub. Chhola, Chheela

Gum locally called '*Kamarkas ka gond* 'is powdered or boiled and taken with milk in the morning. Extract of roots is mixed with ghee and roasted along with wheat flour, made into laddooes and eaten in summers to prevent heatstroke.

Capparis sepiaria L. Heens,Jaal

Root is powdered with that of roots of *Chlorophytum tuberosum, Bombax ceiba* and fruits of *Pedalium murex* and taken with water.

Chlorophytum tuberosum (Roxb.) Baker Safed moosali

Roots crushed into paste, mixed in water, filtered and taken with candy. Roots powdered with that of *Capparis sepiaria, Bombax ceiba* and fruits of *Pedalium*

murex and taken with water.

Cocculus hirsutus (L.) Diels. Jaljamni

Extract of fresh leaves is mixed with water and candy and this jelly is taken in summers.

Corchorus depressus (L.) Stocks Ondhphari

Plant dried in shade, is powdered and taken with candy and whey.

Coriandrum sativum L. Dhana

Seeds powder mixed with sugar and eaten.

Crotalaria medicaginea Lam.Jhojhru

Leaves and seeds are crushed, mixed with sugarcandy and taken orally.

Dactyloctenium aegypticum (L.) Willd. Makra ghas

Seeds are pounded and used to prepare *halwa* and eaten as cooling agent.

Echinops echinatus Roxb. Oont katela

Plant paste smeared on soles and palms to treat heatstroke.

Euphorbia granulata Forsk. Chhoti dudhi

Paste of whole plant is mixed with curd and taken orally.

Ficus benghalensis L. Bad, Bar

Rice is boiled in the decoction of root, mixed with cow' s ghee and eaten to cool down body heat.

Ficus racemosa L. Gular

Fruit paste mixed in water is taken as refrigerant. About 15-20 fruits soaked in water for 4-5 hours are stirred properly, filtered and sugarcandy is added, stored in an earthen pot, kept on the roof for overnight and eaten in the morning.

Grewia tenax (forsk.) fiori Chabeni

Leaves are pounded with black pepper and candy and taken orally.

Heliotropium europaeum L. Oont kameda

Plant extract or leaf paste is applied locally on palms, soles or body or mixed with extract of bulb of *Allium cepa* and used to massage soles and palms 2-3 times a day to treat heatstroke.

Lawsonia inermis L. Mehendi

Leaf paste is applied on soles and palms.

Mangifera indica L. Aam

Raw fruits are roasted in warm ash or boiled, pulp is mixed with water, salt, sugar and cumin seed powder to make a drink and taken as cooling agents.

Mentha spicata L. Podina

Decoction of plant is mixed with black pepper powder and salt and taken orally.

Mucuna pruriens (L.) DC. Koanch

Seeds powder is taken with water.

Ocimum canum Sims. Nagad bavri

Seeds are boiled in milk with sugar and eaten or made into solid laddooes and eaten. Seeds are soaked in water during night and taken next morning.

Pedalium murex L.Dakhini gokharu

Plant is dipped in water 7-10 times and this water is taken orally. Extract of plant is taken orally or powder is roasted in ghee, used to make laddooes and eaten.

Crushed plant is soaked in water, filtered in nexed morning, filtrate mixed with sugrcandy and black pepper powder and taken.

Phyllanthus fraternus Webster Bhui amla

Crushed plant mixed with black pepper powder, candy and water and taken.

Saccharum bengalense Retz. Moonj

Leaves are soaked in water and this water is used to message the body against heatstroke.

Sesamum indicum L.

Oil mixed with cow ghee and is applied on scalp as refrigerant to cure sunstroke.

Sida cordifolia L. Kharenta

Root paste is mixed in water and taken as refrigerant. Seeds powder is roasted with wheat flour in ghee and mixed with sugar and made into laddooes, which are eaten in summers.

Sterculia urens Roxb.Karah

Gum is soaked in water and eaten.

Tribulus terristris Tourn. ex L. Gokhru

Seeds are used to prepare laddooes and eate

Tridax proumbens L. Khoon datani, Kalo bhamro

Leaf juice or paste mixed in whey or curd is taken orally. Plant juice mixed with candy and milk and taken for 10-15 days.

Vernonia cinerea (L.) Less. Sehdei, Khukhreda

Plant juice is mixed with paper powder and candy and taken.

Xanthium strumarium L.Adhasisi

Leaf powder is taken with water.

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References

Anonymous 1994. *Ethnobiology in India* –A Status Report (of All India Coordinated Project on Ethnobiology). Ministry of Environment & Forests, Govt. of India, New Delhi.

Jain, S.K. 1967. Ethnobotany: Its Scope and Study, *Indian Museum Bulletin* 2:39-43.

Jain, S. K. 1987. Ethnobotany-Its scope and various subdisciplines. In Jain S.K. (ed.), *A Manual of Ethnobotany*. Scientific Publishers, Jodhpur.

Jain, S. K. 1989. Ethnobotany. *Ethnobotany* 1:1-5.

Jain, S. K. & Mudgal V. 1999. *Handbook of Ethnobotany*, Bishan Singh Mahendra Pal Singh, Dehradun.

Joshi, P. 1995. *Ethnobotany of Primitive Tribes in Rajasthan*, Rupa Books Pvt. Ltd. Jaipur.

Martin, G.J., 1994. *Ethnobotany- A Methods Manual*, Champman and Hall, Madras, India.

Singh, V. and Pandey, R.P. 1998. *Ethnobotany of Rajasthan*, Scientific Publishers, Jodhpur.