



Traditional use of some leguminous plants in Tarai and Bhawar regions of Kumaun Himalaya, Uttarakhand

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Abstract

The medicinal properties of leguminous plants were analyzed in Tarai and Bhawar regions of Kumaun adjacent to Kashipur at 29° 14-43.6 to 29° 19-50.5 N latitude and 79° 03-22.6 to 79° 04-23.2 E longitude at an elevation of 253.4–265.5 meter above the sea level, within the districts of Nainital and Udham Singh Nagar. The present study documents the ethnomedicinal uses of 25 leguminous plants, which are prevalent in study area along with botanical name, family, vernacular name, habit, plant parts used and mode of ethnomedicinal use.

Keywords: *Ethnomedicinal plants, Leguminous plants, Tarai, Bhawar*

Introduction

Indian traditional medicines are based on different systems such as Ayurveda, Siddha and Unani used by various tribal communities (Gadgil, 1996). 1748 species of medicinal plants have been reported from Indian Himalayan Region (IHR), of these 701 species occur in Uttarakhand state (West Himalaya). In the region most medicinal plants are being extracted for drug and pharmaceutical industries from the wild (Mehta, 2001). People living in the developing countries rely quite effectively on traditional medicine for primary health care (Sullivan and Shealy, 1997; Singh, 2002). Kumaun Himalaya especially Tarai and Bhawar region have high floristic diversity. The present study has been designed to report the medicinal uses of leguminous plants for curing and healing of common diseases on the basis of field surveys and taxonomic identification of plants. The objective of this study is utilization, cultivation and preservation of traditional plants.

Study Area

The study site is situated in Tarai and Bhawar region of Kumaun adjacent to Kashipur at 29° 14-43.6 to 29° 19-50.5 N latitude and 79° 03-22.6 to 79° 04-23.2 E longitude at an elevation of 253.4–265.5 meter above sea level, within the districts of Nainital and Udham Singh Nagar.

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Materials and Method

The present study is the outcome of the two years of critical field survey in the different parts of Tarai and Bhawar region of Himalaya in every season. Medicinal uses was gathered by taking interviews of the local and tribal people. The plants were identified with the help of a plant taxonomist and from the forest flora of Kumaun (Osmoston, 1926), Flora Simlensis (Collet, 1971), Flora Nainitalensis (Gupta, 1968) and Flora of Mussoorie (Raizada, 1978).

Results and Discussion

All known 25 species of leguminous plants were encountered in Tarai and Bhawar region of Kumaun. Botanical names, family, vernacular name, habit, mode of use and plant parts used are given below:

(1) *Acacia auriculaeformis* Cunn. ex Benth.

Family: Mimosaceae; Habit: Tree

Use: It contains tannin useful in animal hide tanning. In India, its wood and charcoal are widely used for fuel. Gum from the tree is sold commercially, but it is said not to be as useful as gum arabic. The tree is used to make an analgesic by indigenous Australians.

(2) *Acacia catechu* Willd.

Family: Mimosaceae; Vernacular Name: Khair, Kattha; Habit: Tree

Use: The bark of this plant is used as an astringent in the treatment of cough.

(3) *Acacia farnesiana* Willd.

Family: Mimosaceae; Vernacular Name: Gand babul; Habit: Tree

Use: The bark of this plant is used as an astringent agent and demulcent.

(4) *Acacia nilotica* (L.) Willd.

Family: Mimosaceae; Vernacular Name: Babul; Habit: Shrub

Use: The bark is used as a tan while gum obtained from stem is used in dysentery. Tender leaves are used as blood purifier while young twigs are used as "Datoon" for cleaning teeth.

(5) *Albizia chinensis* (Oseck) Merr.

Family: Mimosaceae; Vernacular Name: Kala Siris; Habit: Tree

Use: The infusion of bark is used as lotion for cuts, scabies and skin diseases. Leaf is useful in curing fish poisoning.

(6) *Albizia procera* Benth.

Family: Mimosaceae; Vernacular Name: Safed siris; Habit: Tree

Use: Leaves are used as insecticides and poultice applied to ulcer.

(7) *Alysicarpus vaginalis* DC.

Family: Fabaceae; Habit: Herb

Use: Decoction of roots are used in treatment of cough.

(8) *Bauhinia malabarica* Roxb.

Family: Caesalpiniaceae; Vernacular Name: Kachnar; Habit: Tree

Use: Decoction of leaves are used in headache and malaria. Bark is used in treatment of diarrhoea and dysentery.

(9) *Bauhinia vahlii* W. & A.

Family: Caesalpiniaceae; Vernacular Name: Maljan; Habit: Climber

Use: Seeds are used as an aphrodisiac agent. Leaves as demulcent agent.

(10) *Butea monosperma* (Lamk).Thub.

Family: Fabaceae; Vernacular Name: Dhak; Habit: Tree

Use: Seeds are used as an anthelmintic agent. Gum is astringent used in treatment of diarrhoea and dysentery. Flowers are astringent, diuretic, depurative and aphrodisiac. The seeds and bark of this plant are used in curing snake bite.

(11) *Cassia fistula* L.

Family: Caesalpiniaceae; Vernacular Name: Amaltas; Habit: Tree

Use: The pulp from the pods is of great therapeutic value. It is a mild pleasant and safe purgative, even

for children and expectant mothers. Its confection is given in diabetes. The leaves are emollient; their juice makes a useful dressing for ringworm and chilblains. The root is a tonic febrifuge and a strong purgative.

(12) *Cassia mimosoides* L.

Family: Caesalpiniaceae; Vernacular Name: Patwa Ghas; Habit: Herb

Use: The roots are used for treating spasm of stomach.

(13) *Cassia obtusifolia* L.

Family: Caesalpiniaceae; Vernacular Name: Chakunda; Habit: Herb

Use: Decoction of leaves are used as laxative. Leaves and seeds are used in skin diseases such as ringworm and itch. Roots are used in treatment of snake bite.

(14) *Cassia occidentalis* Vahl

Family: Caesalpiniaceae; Vernacular Name: Kasondi; Habit: Herb

Use: Whole plant is used as a febrifuge, purgative, diuretic and bitter tonic. Seeds and leaves are used externally in skin diseases, antiperiodic. Leaves, seeds and roots are used as purgative, however roots are also used in treatment of snake bite.

(15) *Crotalaria mucronata* Desv.

Family: Fabaceae; Vernacular Name: Sen; Habit: Herb

Use: The seeds are used as a substitute of coffee.

(16) *Crotalaria spectabilis* Roth

Family: Fabaceae; Vernacular Name: Jhunjunia; Habit: Herb

Use: Plant used in scabies. Seed, leaves and stem used in treatment of hypertension.

(17) *Dalbergia sisso* Roxb.

Family: Fabaceae; Vernacular Name: Shisam; Habit: Tree

Use: The decoction of leaves is useful in treatment of gonorrhoea. Roots are used as an astringent agent.

(18) *Delonix regia* Raf.

Family: Caesalpiniaceae; Vernacular name: Gulmohar; Habit: Tree

Use: Leaves are used in treatment of rheumatism.

(19) *Desmodium gangiticum* (L.) DC.

Family: Fabaceae; Vernacular Name: Sarivan; Habit: Herb

Use: Roots are used as an astringent in the treatment of diarrhoea, diuretic, chronic fever, biliousness, cough, vomiting, asthma, snake bite and scorpion sting.



(20) *Desmodium pulchellum* Benth. ex Baker

Family: Fabaceae; Vernacular Name: Ladrom; Habit: Herb

Use: Decoction of the bark is used in hemorrhage, diarrhoea, poisoning and eye diseases. Flowers are used in biliousness.

(21) *Dolichos biflorus* L.

Family: Fabaceae; Vernacular Name: Kulthi; Habit: Herb

Use: Seeds used as an astringent, diuretic. Decoction of plant used in leucorrhoea and menstrual disorders.

(22) *Indigofera tinctoria* L.

Family: Fabaceae; Vernacular Name: Mehandi; Habit: Herb

Use: Extract of plant is used in bronchitis and hepatitis. Juice of leaves are used as prophylactic against hydrophobia. Extract of plant is given in epilepsy and nervous disorders, in bronchitis and as ointment in sores, old ulcers and hemorrhoids. Root are used in hepatitis and scorpion sting treatment.

(23) *Melilotus indica* All.

Family: Fabaceae; Vernacular Name: Vanmethi; Habit: Herb

Use: Seeds are used in bowel complaints, infantile diarrhoea and given in gruel. Whole plant is used as a emollient, externally as a fomentation and plaster or poultice for swellings.

(24) *Mimosa pudica* L.

Family: Mimosaceae; Vernacular Name: Lajwanti, Chuimui; Habit: Shrub

Use: Decoction of root is useful in gravelly complaints. Leaves and root are used in piles, scorpion sting and fistula. Leaves rubbed into a paste is applied to hydrocele.

(25) *Tephrosia purpurea* Pers.

Family: Fabaceae; Vernacular Name: Sarphonka; Habit: Herb

Use: The pills made from fresh root bark with a little black pepper is given in case of obstinate colic. Whole plant is used as an anthelmintic for children and is used internally as a blood purifier.

Conclusion

The leguminous plants are widely used traditionally by the local people in Tarai and Bhawar of Kumaun region. The study documented 25 leguminous plants which are used in curing and healing of different diseases. This data could be useful for phytochemists and pharmacologists to determine their true therapeutic compounds. It may bring light to new sources of drugs of herbal origin because many medicinal plants are reported to be threatened to extinction.

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