

Studies on plant associated indigenous knowledge among the *Malanis* of Kullu district, Himachal Pradesh

Parveen Kumar Sharma¹, NS Chauhan² and Brij Lal*³

¹Department of Agroforestry and Environment, COA, CSKHPKV, Palampur 176 062, Himachal Pradesh, E-mail- praveenkumarsharma11@rediffmail.com; ²Dr Y S Parmar University of Horticulture and Forestry, Nauni, Solan 173 230, Himachal Pradesh; ³*Biodiversity Division, Institute of Himalayan Bioresource Technology, PO Box 6, Palampur 176 061, Himachal Pradesh, E-mail: brijhbht@yahoo.co.in.

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The *Malani* is an ethnic community inhabiting a remote village generally called as Republic of Malana, located in Parvati valley of Kullu district, Himachal Pradesh. The adjoining area of Malana is inhabited by *Gujjars*, *Gaddis*, and other rural communities. Since ages, these people have been utilizing their ambient plant resources for food, fodder, fibre, medicine, fuel, and other purposes. During ethnobotanical surveys conducted in 2000-2002 among the *Malanis* and other inhabitants of Parvati valley, first hand information on 35 plant species was recorded. The uses in details are described in the present communication.

Keywords: Traditional Knowledge, Parvati Valley, Western Himalaya, *Gujjar*, *Gaddi*, *Malani*, *Kulluvi*, Tribes, Ethnobotany, Himachal Pradesh

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The present study was focused on the *Malani* community and other migratory pastorals like *Gaddi* and *Gujjar* inhabiting Malana village and its adjoining areas. The Malana is a small hub of about 100 houses with a population of 1000 people. It is situated in the remote area of Parvati valley in the North-East of Kullu district, Himachal Pradesh (Fig. 1), at an altitude of 2650 m amsl. It is considered one of the oldest villages in Kullu district and popularly known as the Republic of Malana¹⁻². The village has its own life style, social set-up and a unique system of self-governance. The inhabitants are called as *Malani*. Parvati valley is one of the beautiful valleys viz., Kullu, Solang, Nagar and inner and outer Seraj located in different parts of Kullu district. It is about 130 km long narrow valley, situated between 31°20'21" - 32°25'0" N and 76°56'30" - 77°52'20" E in South-East of Kullu district between the elevation of 1100 - 5500 m above mean sea level (amsl). It is widely known for its rich vegetation and scenic beauty. The valley is rich in natural resources like flora, fauna, minerals, perennial sources of water and many hot springs including Manikaran hot water springs. Parvati river, a tributary of Beas, also flows in the Northwestern direction in the valley, which

originates from the glacier Mantalai (5200 m) in great Himalayan ranges. Because of varied altitudinal ranges, Parvati valley harbours a wide range of plant diversity comprising of sub-tropical to temperate alpine floral elements³⁻⁴.

Due to remoteness of the area, the native people are largely dependent upon locally available natural plant resources to fulfill their day to day needs. Farming is the major occupation of the inhabitants, which grow traditional food crops like pulses, amaranthus, buckwheat, beans, and other cash crops in their lands. They also collect official parts of various medicinal and aromatic plants for their earnings. For healthcare, the native people depend upon medicinal herbs of their surroundings prescribed by local traditional healers, called *Vaid*. The migratory people such as *Gaddi* and *Gujjar* are locally called as *Fual* (shepherds). In search of grazing pastures and meadows, *Fuals* travel to high altitude in summer along with their herds and return to warmer lower ranges of Himalaya in winter. There is an intimate relationship between these native people and plant resources of their surroundings. Thus, the local people are well versed with a large number of local plants used for food, fodder, fibre, medicinal and socio-religious purposes.

*Corresponding author

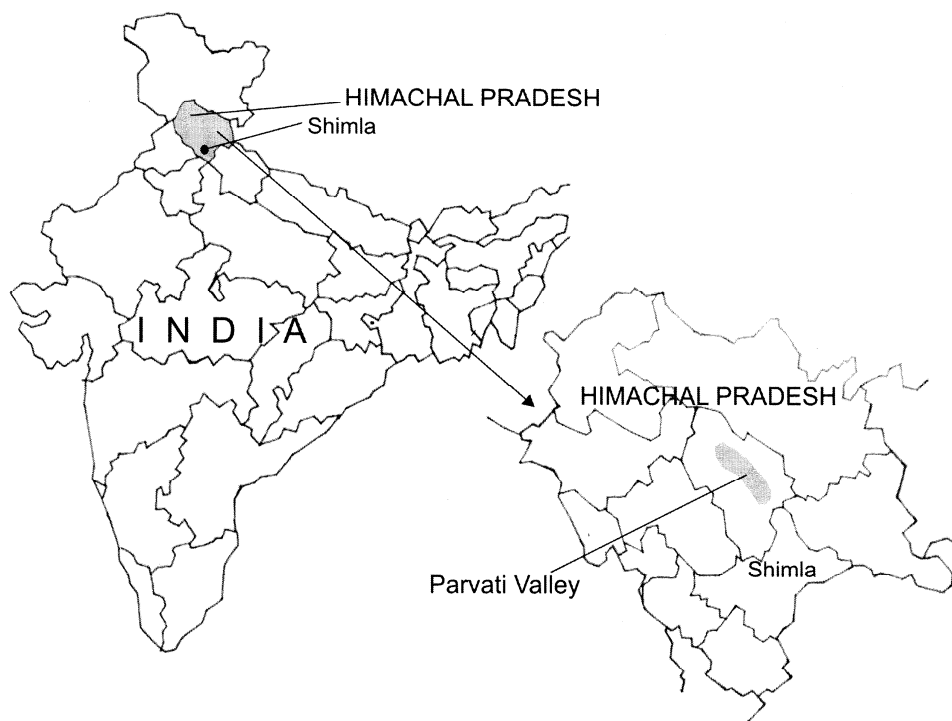


Fig. 1 Location Map of Parvati Valley, Himachal Pradesh

To inventorize and identify potential plant resources of Parvati valley and its adjacent areas, significant contribution was made by some earlier workers during past three decades^{3,5-9}. But, in recent years efforts were also made by several workers to document plant associated indigenous knowledge prevailing among the inhabitants dwelling in Parvati valley^{4,10-13}. It was observed that emphasis was given by these workers mainly on medicinal use of plants, while aspects related to plants used for dyes and tannins, animal care, socio-magico-religious belief and household utility remained neglected. Therefore, keeping in view the importance of other uses of plants rather medicinal utility, the present study was undertaken.

Methodology

In order to prepare a detail account on indigenous use of plant wealth of Republic of Malana and adjoining areas, extensive and intensive field surveys were carried out during 2000-2002 in different localities. First hand information was recorded on plants used as home remedies for treating both human and animals, use for dyes and tannins, socio-magico-religious beliefs and other use, through formal interviews of the inhabitants. Data were also collected on local name of plant, parts used, ailments treated,

mode of usage, besides collecting plant voucher specimen. Collected specimens were processed, identified and deposited in the herbarium of University of Horticulture and Forestry, Nauni, Solan, as reference material. Plants are grouped into major 5 categories namely plants used for i) therapeutic purpose, ii) insect/pest repellents, iii) dyes and tannins iv) Socio-magico-religious beliefs and v) miscellaneous uses. Further, under each category, plants are arranged in alphabetical order followed by family (in parenthesis), vernacular name and ethnobotanical use.

Ethnobotanical Observations

1. Plants of therapeutic importance

1.1 For general medicine

1.1.1 *Aesculus indica* (Collebr. ex Cambess) Hook. (Hippocastanaceae)

Vernacular names: *Khanor*, *Khnor*

Its kernels are dried and made into flour. The flour is washed in water until the toxic or bitter substance is removed. The dried flour is used for preparing porridge/pudding and given as tonic for ladies after delivery.

1.1.2 *Ainsliaea aptera* DC. (Asteraceae)

Vernacular name: *Kadvi-booti*

The roots are used as a remedy in acute stomachache. It is believed that a single dose of about 2 gm root powder taken with lukewarm water relieves pain quickly. It is also used as vermicide. Shepherds in hill areas use it an effective medicine in diarrhoea.

- 1.1.3 *Berberis aristata* DC. (Berberidaceae)
Vernacular name: *Kashmal*
The root extract called *Rasount*, is used to cure eye diseases, skin diseases, jaundice, piles and malaria. Fruits are eaten as laxative and anti-scorbutic.
- 1.1.4 *Geranium wallichianum* D. Don ex Sweet (Geraniaceae);
Vernacular name: *Ratanjot*
The roots are used against toothache and eye troubles.
- 1.1.5 *Melothria heterophylla* (Lour.) Cogn. (Cucurbitaceae)
Vernacular names: *Jangli-kakri*, *Gawal-kakru*
About 2 gm dried fruit powder is taken twice daily with milk for curing seminal debility and spermatorrhoea to improve vitality.
- 1.1.6 *Inula grandiflora* Willd. (Asteraceae)
Vernacular name: *Poshkar*
About 10 gm root powder with lukewarm water is given twice a day for curing cough, cold and throat irritation.
- 1.1.7 *Pleurospermum brunonis* (DC) CB Clarke (Apiaceae)
Vernacular names: *Nesar*, *Losar*
The powder of the flowering shoots is mixed with cow's fresh butter and massaged over the entire body to allay fevers.
- 1.1.8 *Saussurea gossypiphora* D. Don (Asteraceae)
Vernacular name: *Gugghi-badshah*
The wooly hairs mixed with *ghee* (refined butter) are given to the asthma patients. The aerial part is applied on cuts and wounds to check bleeding and to enhance healing.
- 1.1.9 *Saussurea obvallata* (DC.) Edgew. (Asteraceae)
Vernacular name: *Dodaphool*
The root paste is applied on cuts and bruises.
- 1.1.10 *Sedum ewersii* Ledeb. (Crassulaceae)
Vernacular name: *Hiun-sheli*
The leaves are chewed in acute gastric problems. The plant is crushed into a paste and paste is applied on wound to heal burns.
- 1.1.11 *Tanacetum longifolium* Wall ex DC. (Asteraceae)
Vernacular name: *Langri*
The leaf juice is used as an antispasmodic, carminative and antipyretic.
- 1.1.12 *Thymus serpyllum* Linn. (Lamiaceae)
Vernacular name: *Ban-ajwain*
The plant decoction is used as an effective home remedy for curing cold, cough, fever and stomach problems. The powder of the flowers mixed with *Gur* (jaggery) is given as vermicide.
- 1.1.13 *Valeriana jatamansi* Jones (Valerianaceae)
Vernacular names: *Mushkbala*, *Nihani*
About 10 gm root powder is taken with lukewarm water in acute stomachache. The root decoction is prescribed in insomnia.
- 1.1.14 *Verbascum thapsus* Linn. (Scrophulariaceae)
Vernacular name: *Kolomasta*
The leaves are crushed and given in constipation and stomach pain.
- 1.1.15 *Viola serpens* Wall. (Violaceae)
Vernacular name: *Banaksha*
Plant decoction is given for expulsion of phlegm and for curing sore throat.
- 1.1.16 *Woodfordia fruticosa* (Linn.) Kurz (Lythraceae)
Vernacular name: *Dhai*
The root paste is applied on body to get relief from muscular pain. The young leaves are considered as blood purifier.
- 1.2 Remedy for bone and joint ailments**
- 1.2.1 *Aesculus indica* (Collebr. ex Cambess) Hook. (Hippocastanaceae)
Vernacular names: *Khanor*, *Khnor*
The bark is applied in the form of a paste at dislocated joints.
- 1.2.2 *Fritillaria cirrhosa* D. Don (Liliaceae)
Vernacular name: *Hadjod*
Paste of the bulbs is applied on fractured bones and it is believed that minor fractures are fully recovered within 15-20 days.
- 1.2.3 *Pinus wallichiana* A.B. Jackson (Pinaceae)
Vernacular name: *Kail*
The stem bark in form of stripes is used as bandage in setting of dislocated or fractured parts in both human being and cattle, particularly in case of sheep and goats.
- 1.2.4 *Prinsepia utilis* Royle (Rosaceae)
Vernacular name: *Bhekhal*

The oil extracted from the seeds is used for massaging on joints in rheumatic complaints.

1.3 Plants used in animal health care

1.3.1 *Asparagus filicinus* Buch.- Ham. ex D. Don (Liliaceae)

Vernacular name: *Sansbai*

The tuberous roots are crushed and mixed with flour and the mixture is given to milching cattle for increasing milk production.

1.3.2 *Betula utilis* Buch. - Ham. ex D. Don. (Betulaceae)

Vernacular names: *Takpa, Bhojpatra*

The ash obtained after burning of stem bark is used to cure rheumatic pains. It is also used as a healing agent against deep cuts.

1.3.3 *Delphinium vestitum* Wall. ex Royle (Ranunculaceae)

Vernacular names: *Changuthpa, Salyan*

The root powder is used in healing of ulcers and wounds in cattle. The leaves are considered poisonous to goats.

1.3.4 *Heracleum candicans* Wall. ex DC (Apiaceae)

Vernacular name: *Rasal*

The plant powder is given in giddiness. The leaves and shoots are dried, preserved and given as nutritious fodder in lean period, particularly in winter. The roots are considered poisonous.

1.3.5 *Leucas lanata* Benth. (Lamiaceae)

Vernacular name: *Dhurlughas*

The leaves are roasted in *ghee* (refined butter) and are administered orally to expel placenta after delivery. The infusion of the leaves with bamboo leaves is given in diarrhoea and dysentery in cattle. It is also given with buttermilk as a laxative agent.

1.3.6 *Thalictrum foliolosum* DC (Ranunculaceae)

Vernacular name: *Pilijari*

The plant is reported to be useful to cure foot and mouth disease of animals. The root is applied in the form of poultice to cure boils and ulcers.

2. Plants used as insect/pest repellent

2.1 *Boenninghausenia albiflora* (Hook.) Reichb. ex Meissner (Rutaceae)

Vernacular name: *Pisumar-buti*

The aerial part of the plant is put under the bed sheet to repel lice, fleas and other insects.

2.2 *Cedrus deodara* (Roxb. ex D. Don) G. Don (Pinaceae)

Vernacular names: *Diar, Deodar*

The oil obtained from heartwood on distillation, is applied on body of sheep and goats as an effective insect repellent. It is also applied on wounds in cattle to repel insects.

2.3 *Pleurospermum brunonis* (DC) CB Clarke (Apiaceae)

Vernacular names: *Nesar, Losar*

The dried herb or the garland prepared from the plant is kept in boxes containing clothes as a preservative against the attack of moths and silver fish.

2.4 *Selinum tenuifolium* Wall. (Apiaceae)

Vernacular name: *Mathosal*

The roots are burnt and smoke produced is used for repelling insects.

3. Plants used for dyes and tannins

3.1 *Arnebia benthamii* (Wall. ex G. Don) I. M. Johnston (Boraginaceae)

Vernacular name: *Ratanjot*

The natives use the purple-red dye, obtained from the roots, for dyeing woolen garments. The ladies apply the dye obtained after putting dried roots into mustard oil on hairs as colouring agent.

3.2 *Berberis aristata* DC (Berberidaceae)

Vernacular name: *Kashmal*

The roots and stems yield yellow dye, which is used in dyeing woolen garments and fibres.

3.3 *Geranium wallichianum* D. Don ex Sweet (Geraniaceae);

Vernacular name: *Ratanjot*

The roots yield red-purple dye and are used as dyeing and tanning material by the local inhabitants.

4. Plants used in magico-religious beliefs

4.1 *Juniperus communis* Linn. (Cupressaceae)

Vernacular name: *Bethar*

The twigs are used as incense and in oracle rites in driving away evil spirits.

4.2 *Juniperus recurva* Buch.-Ham. (Cupressaceae)

Vernacular names: *Dhoop, Shur*

The plant is regarded as sacred tree. The foliage bearing twigs are dried and used as incense. The foliage are commonly used in *Havan* (yagna).

4.3 *Jurinea dolomiaea* Boiss. (Asteraceae)
Vernacular name: *Dhoop*
The dried roots of the plant are used in the preparation of *Dhoop* (incense), which is used to purify the air and employed in worships and prayers.

4.4 *Pleurospermum brunonis* (DC) CB Clarke (Apiaceae)
Vernacular names: *Nesar, Losar*
The plant is used in religious ceremonies and offered to the deities. Some times it is also used as an ingredient of incense prepared by the local people.

4.5 *Saussurea gossypiphora* D. Don (Asteraceae)
Vernacular name: *Gugghi-badshah*
The plant is regarded as sacred one. It is burnt and the smoke produced acts as an fumigating agent and considered effective to allay the effects of evil spirits.

4.6 *Saussurea obvallata* (DC.) Edgew. (Asteraceae)
Vernacular name: *Dodaphool*
The flowering bracts are used in preparing garlands with scented *Pleurospermum brunonis*. The flowers and garlands are kept in houses for long period and offered to their deities on the occasion of local festivals.

4.7 *Selinum tenuifolium* Wall. (Apiaceae)
Vernacular name: *Mathosal*
The roots are used as a substitute of '*Bhutkesi*' (*Selinum vaginatum*) and used an ingredient in *Dhoop* (incense bar) preparation.

4.8 *Skimmia laureola* Seib.& Zucc. ex Walp. (Rutaceae)
Vernacular name: *Dhoop, Parvati-hing*
Its aromatic leaves are dried and used as an ingredient in *havan* (yagna).

4.9 *Verbascum thapsus* Linn. (Scrophulariaceae)
Vernacular name: *Kolomasta*
The plant is burnt and *Dhuni* (smoke) is used by *tantrics* (ritual performers) to drive away the ghostly instincts.

5. Miscellaneous uses

5.1 *Berberis aristata* DC. (Berberidaceae)
Vernacular name: *Kashmal*
Local people mostly children and women, commonly relish the ripe fruits.

5.2 *Cyathula tomentosa* Moq (Amaranthaceae)
Vernacular name: *Silath*

The hard hairy flowering spikes are put in the holes to control the movements of mouse.

5.3 *Melothria heterophylla* (Lour.) Cogn. (Cucurbitaceae)

Vernacular names: *Jangli-kakri, Gawal-kakru*
The ripe fruits are eaten for their sweet taste.

5.4 *Saussurea gossypiphora* D. Don (Asteraceae)
Shepherd rubs the powder of the plant on body of newly born sheep and goat kids to attract the mother towards its baby for proper milk feeding.

5.5 *Taraxacum officinale* Weber (Asteraceae)
Vernacular name: *Aachak*
The plant is crushed and the paste obtained is given orally to the patient in snakebite. The paste is also applied externally on wound.

Conclusion

The present study reveals that the indigenous people dwelling in remote tribal areas are the custodians of knowledge associated with a wide range of utility of plant resources of their surroundings. Out of the total 35 plant species reported here, 16 species are used as general home remedies to treat common ailments like cough and cold, fever, throat and stomach related problems, and as a general tonic; 4 plants in bone dislocation/ fracture and joints pain; 6 species as veterinary medicine; 4 as insect repellent; 3 for tannins and dyes; 9 species for socio-magico-religious beliefs and 5 for miscellaneous uses. It is observed that plants like *Aesculus indica*, *Arnebia euchroma*, *Berberis aristata*, *Geranium wallichianum*, *Juniperus* spp., *Melothria heterophylla*, *Pleurospermum brunonis*, *Saussurea* spp., *Selinum tenuifolium*, *Verbascum thapsus* are considered relatively more significant as these species are commonly used for different purposes. It has been realized that a vast treasure of knowledge lies with these ethnic people living in remote tribal areas, but they do not disclose it easily to others particularly to outsiders, as there is a general belief that if the information about the use of herbs are revealed, it will lose its healing power. Therefore, there is a need to document country wide such valuable knowledge not only about plants, but also about other natural resources like animals, insects, and minerals, before it is lost forever.

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References

- 1 Janaratha T C, (ed.). Himachal Pradesh District Gazetteer-Kullu, Shimla, 2000.
- 2 Sharma P K, Chauhan N S, & Brij Lal, Malana – an abode of unique democracy in high mountains of western Himalaya, *Man in India*, 84 (3&4) (2004), 341-351
- 3 Jain, S K, and Bharadwaja R C, On a botanical trip to Parvati valley, *Indian For*, 75(1951), 302-315.
- 4 Sharma P K, Chauhan N S and Brij Lal, Observations on traditional phytotherapy among the inhabitants of Parvati valley in western Himalaya, India, *J Ethnopharmacol*, 92(4) (2004), 167-176
- 5 Puri G S, The distribution of conifers in Kullu, Himalayas with special reference to Geology, *Indian For*, 76 (1952), 144-153.
- 6 Chowdhery H J and Wadhwa B M Flora of Himachal Pradesh, Vol 1-3, (Botanical Survey of India, Howrah), 1984.
- 7 Badola H K, Biodiversity Conservation- Study of Kanawar wildlife sanctuary in Himachal Pradesh. Research for Mountain Development. Some initiatives and accomplishment, (Gyanodaya Parakashan, Nainital), (1998), 407-430.
- 8 Dhaliwal D and Sharma M, Flora of Kullu district, Himachal Pradesh, (Bishen Singh, Mahendra Pal Singh, Dehradun), 1999.
- 9 Singh S K and Rawat G S, Flora of Great Himalayan National Park, Himachal Pradesh,(Bishen Singh, Mahendra Pal Singh, Dehradun), 2000.
- 10 Uniyal M R and Chauhan N S, Commercially important medicinal plants of Kullu, Forest Division of Himachal Pradesh, Nagarjun, (1972), 15.
- 11 Chauhan N S, Medicinal and aromatic plants of Himachal Pradesh, (Indus Publishing Company, New Delhi), 1999.
- 12 Singh S K, Ethnobotanical study of useful plants of Kullu district in Northwestern Himalaya, India, *J Econ Tax Bot*, 23(1) (1999), 185-198.
- 13 Sharma P K, Chauhan N S and Brij Lal, Commercially important medicinal and aromatic plants of Parvati valley of Himachal Pradesh, *J Econ Tax Bot*, 27(4) (2003), 937-942.