SOME NOTEWORTHY ETHNOMEDICINAL PLANTS FROM SHIVALIK HILLS OF J.&K., INDIA

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Abstract: The paper deals with ethnomedicinal information on 50 plant species belonging to 37 families and 46 genera collected during the field survey from the Shivalik Hills of J&K State. Of the 37 families, Rosaceae represented by 4 species dominated the floral composition followed by Fabaceae and Euphorbiaceae represented by 3 species each. The four major reported life forms were trees, shrubs, herbs and climbers. Herb makes up the highest proportion of the medicinal plant with 25 species followed by trees (12 species), shrubs (10 species) and climber with 3 species. All the parts of plants were used as a source of medicine against various ailments. Leaf was the most frequently used part of plant species followed by fruit, root, flower and bark etc. 25 ailments were reported among the inhabitants of Shivalik Hills of J&K State. The study reveals that most common diseases among the locals were skin problems.

Key words: Ethnomedicinal information, Shivalik Hills, Ailments, Life forms.

INTRODUCTION

The use of plants for medicinal purposes and human sustenance has been in practice in India since the Vedic age. India is sitting on a gold mine of well-recorded and traditionally well practiced knowledge of herbal medicines. It is generally established that over 6000 plants in India are used for traditional, folk and herbal medicines, representing about 75% of the medicinal needs of the third world countries (Dubey *et al.*, 2004). It is documented that 80% of the world population has faith in traditional medicines, particularly plant drugs for their primary health care (Kala *et al.*, 2006). As Indian Himalayan Region (IHR) is concerned it extends from Jammu & Kashmir in the Northwest to Arunachal Pradesh in the east. Typical topography of the region supports the diverse habitats, species, populations, communities and ecosystems. Vegetation ranges from tropical to alpine types. It supports about 18,440 species of plants, of which about 8,000 species are angiosperms (Singh and Hajra, 1996). This rich diversity is being used by the native communities for their sustenance throughout the IHR (Samant and Dhar, 1997; Samant, *et al*.,1998). The Inhabitants of Indian Himalayan Region are relatively poor and rely for their sustenance on the biological resources in one way to other. In NW Himalayan region of Jammu and Kashmir, inspite of disturbed conditions for the past two to three decades, many ethno-botanists like Kapoor and Sarin (1987), Kumar and Naqshi (1990), Singh (1996), Koul (1997), Viswanathan (1999), Gupta *et al.*, (1999), Chaurasia *et al.*, (1999a,b), Kirn *et al.*, (1999a,b,c), Srivastava *et al.*,(2000), Sarver (2007), Kumar (2008), Rashid *et al*.,(2008), Sarver and Anand (2009), Sarver *et al*.,(2009), Kumar (2009), Khan *et al*.,(2009) have contributed a lot to the knowledge of medicinal plants. As far as Shivalik ranges of NW Himalaya is concerned, no work has been done except one or two scanty reports (Srivastava *et al.*, 1981; Kant and Sharma, 2001). Although, the area has rich repository of ethnobotanically important plants which are used widely by the inhabitants for medicine, edible (food) fuel, fodder, house building, making agriculture tools, fibres, religious and various others.

Majority of the population is localized in the rural areas. Moreover, there are no suitable health facilities due to the lack of the proper motorable roads. The tribal and locals face lot of problems particularly dealing health problems. In the absence of modern medicinal facilities, they are wholly dependent on plants available around them for treating various ailments by using the plants in their own traditional methods. Additionally, very few local orthodox doctors like hakeems and vaids are left who know about the miraculous use of medicinal plants and their properties. There are no written documentary records. Moreover, the knowledge is also not being transferred further. Therefore, this valuable traditional knowledge is getting vanished with them. Through the realization of the continuous erosion in the traditional knowledge of many valuable plants being used for medicine in the past and renewal interest, currently, special attention has been paid to extract and gather knowledge from the ethnic people and to compile it in a consolidated form. A great need is being felt that relevant and upto date information on the inherent traditional knowledge on medicinal phyto-diversity of Shivalik Himalaya of Jammu be made available, since the area has never been explored earlier in detail. Keeping these facts in view the present studies deals with the enlisting of some noteworthy ethno-medicinal plants of Shivalik Hills of J&K alongwith scientific name, local and family name, life form and their Indigenous uses.

MATERIAL AND METHODS

Intensive collection trips were made at various time periods from January 2005 to March 2008 to various sites which are densely inhabited by the tribal groups covering all the areas, based on the vegetation cover and altitudinal variations. Informants of different age group from each site were interviewed. The selection criterion for informants was the reliability and depth of knowledge each one of them had. In general the best informants were the older men and women who were alive at times when their culture was subjected to fewer inputs from contemporary society. The criterion employed for the ethnobotanical data was that at least three informants from each selected sites had to report identical data regarding particular medicinal plant species. The information was gathered either by taking interview of the informant or as witness of the uses during the period of studies in the field to identify the levels of present use of medicinal plants. Also various threats to the vegetation of study area were recorded. Informants were also requested to accompany in the field to detect plants, once the information on particular plant was regarded it was repeatedly verified to record its local name and uses. The plant species were collected, dried and used for making voucher specimens according to herbarium techniques and identified using Flora of Jammu and its neighborhood by Sharma and Kachroo (1981), Flora of Udhampur by Swami & Gupta (1998), Flora of Pakistan by Nasir & Ali (1982-1989). Herbarium specimens were also compared with that of the Department of Botany and RRL for the purpose of confirmation of identifications of each specimen. All the plant specimens were kept at the Department of Botany, Univ. of Jammu.

RESULTS AND DISCUSSIONS

Enumeration of Medicinal Plants

All the medicinal plants collected and studied are enumerated alphabetically. The family names are mentioned in brackets. This is followed by local names, life forms and detailed uses of the plants.

Achyranthes aspera L. (Amaranthaceae) ; Puthkanda, Purkanda,
Life form: Herb
Plant paste is used to treat eye problems, insect bite, whooping cough and rheumatism. Root paste is administered to stop bleeding after abortion and also to facilitate delivery.

Acorus calamus L. (Araceae); Bach,
Life form: Herb
Rhizome of plant is used by the locals against stomach troubles, asthama, snake bites and toothache.

Ajuga bracteosa Wall. Ex. Benth. (Lamiaceae); Phul jadhi,
Life form: Herb
Juice extracted from leaf is applied to treat the mouth ulcers and jaundice. Locals apply the thick paste of leaves on the wounds, tightened with a piece of cloth to heal it. Leaves cooked in mustard oil are also applied on the head to get relief from chronic headache. Leaves are made into paste and use with water to wash hair to kill lices and also consider very effective against dandruff.

Albizia lebbeck (Linn.), (Mimosaceae); Siri,
Life form: Tree
Flowers are made into paste applied externally to cure boils, skin eruption and swellings. Bark is useful in bronchitis, leprosy and helminthes infections.

Berberis lycium Royle (Berberidaceae); Kamble, Simblu,
Life form: Shrub
Root powder is taken with milk in early morning empty stomach to cure jaundice. Root and bark powder is also used to cure diabetes. The root extract is applied externally against bleeding piles where it acts as antiseptic and gives cooling effect.

Boerhaavia diffusa Linn. (Nyctaginaceae); Itt-sitt,
Life form: Herb
Whole plant is also used against epilepsy, headache, rheumatism and itch.

Calotropis procera (Ait)Ait., (Asclepiadaceae); Akk,
Life form: Herb
Latex of plant is used by the tribal of the area against skin diseases, epilepsy, rheumatism, tuberculosis and toothache. Flower infusion is used to cure cough, cold, asthma and digestive problems. Root bark is recommended by the local vaids against dysentery.

Cannabis sativa Linn. (Cannabinaceae); Pang,
Life form: Herb
The leaves of plants inhaled with cigarette for inducing sleep. Leaf powder is used in the treatment of wounds.

Capsella bursa pastoris Medik , (Brassicaceae); Guaal Batua,
Life form: Herb
The leaf of plant is used for healing of wounds, to stop the bleeding from internal organs.

Cassia occidentalis Linn., (Caeselpinaceae); Haedma
Life form: Herb
Leaves are used as anthelmintic. Roots are used against skin ailments and seeds are supposed to be effective against diabetes.

Cassia tora Linn., (Caeselpiniaceae); Aayroun,
Life form: Herb
Leaf paste is applied on cuts and wounds. Seeds are made into paste and used in treating skin ailments, headache and body pains.

Cirsium arvense (Linn.) Scop. (Asteraceae); Pousa kanda,
Life form: Herb
The plant paste is used externally on boils and to heal the wounds. Root chewed as a remedy for toothache. Root decoction used to treat worms in children.

Clematis Montana Linn. (Ranunculaceae); Total,
Life form: Climber
Leaves and flowers paste is used to treat boils, pimples and wounds.

Colebrookea oppositifolia Smith., (Lamiaceae); Chitti Suhali,
Life form: Herb
Leaf paste of plant is used for healing wounds.

Cuscuta reflexa Roxb. (Cuscutaceae) ;Aandal,
Life form: Climber
Plant paste is applied externally to heal the wounds and bone fracture. The extraction of plant and garlic mixed with warm mustard oil is massaged on body to relieve body ache and to cure skin infections specially ringworm. Plant infusion is used internally to treat fever and applied externally as a wash for sores and itching.

Dalbergia sissoo Roxb. (Fabaceae); Tali,
Life form: Tree
Leaf paste with little common salt is taken by the locals for the treatment of diarrhoea. Wood oil is used externally for the treatment of skin problems.

Duchesnea indica (Andr.) (Rosaceae); Ankhe
Life form: Herb
Leaves of the plant are crushed and applied as paste on wounds, cuts and other skin problems

Emblica officinalis Gaertn., (Euphorbiaceae); Aamla,
Life form: Tree
Fruits of the plant are supposed to be rich in Vit. C. They are used by the locals as liver and heart tonic, against piles and stomach complaints. Dried fruits are used widely for the treatment of diarrhoea.

Euphorbia helioscopia Linn., (Euphorbiaceae); Dudhal Patal,
Life form: Herb
Milky sap of plant apply externally on skin eruptions. The plant juice is also used to cure rheumatism

Ficus palmata Forssk., (Moraceae); Fagwara, Fagara
Life form:Tree
Ripe fruits are used by the locals for high blood pressure. Fruits paste is used for skin problems.

Ficus religiosa Linn., (Moraceae); Bori
Bark juice is use as a mouth wash for toothache. Bark paste is also applied for scabies and other skin diseases.
Fumaria indica (Hausk.) Pegsley. (Fumariaceae); Pitpapra,
Life form: Herb
Plant juice mixed with honey is used as a blood purifier, to prevent vomiting, and applied against skin diseases.

Hedera nepalensis L. (Araliaceae); Katimberi,
Life form: Climber
The leaves lubricate with ghee and apply externally on head to get relief from headache. The oil obtained from berries is used to get relief from rheumatic pain.

Impatiens balsamina L., (Balsaminaceae); Impatiens,
Life firm: Herb
The paste of whole plant is applied on forehead to cure headache and fever.

Indigofera tinctoria Linn.,(Fabaceae); Neil kathi,
Life form: Shub
Plant twig is used to clean the teeth. Leaf paste is used against the wounds.

Ipomoea carica (L.) Sweet. (Convolvulaceae); Akk,
Life form: Shrub
Plant leaf is used with oil to cure wounds.

Justicia adhatoda Linn., (Acanthaceae); Branker,
Life form: Under shrub
Boiled leaves are taken orally by the locals for checking the fever. Leaf paste applied externally for rheumatic pain and joint dislocation.

Mallotus philippensis (Lamk.) Muell.-, (Euphorbiaceae); Kamela, Sindur,
Life form: Tree
Fruit powder mixed with water is taken among the inhabitants to cure colic pain, jaundice and piles. Bark decoction is used in abdominal pain.

Melia azadarach Linn., (Meliaceae); Dhraink,
Life form: Tree
Infusion of leaves is taken for 3 days to cure headache, fever, cold and cough. Bark is a bitter tonic and is effective against skin ailments like leprosy and piles. Bark decoction is useful against diarrhea and stomachache..

Oxalis corniculata Linn., (Oxalidaceae); Khatti booti,
Life form: Herb
The paste of herb is massaged on forehead by the locals to get relief from headache. Decoction of plant is taken orally thrice a day for diarrhoea and dysentery.

Pinus roxburghii Sargent, (Pinaceae); Chir,
Life form: Tree
The crushed leaves with cow dung are massaged to get relief from backache. The oil extracted from the plant is used by the locals to cure constipation. Resin called jeegan is applied locally on cracked heels. Living in a hut built in a pine forest for few months is believed to cure tuberculosis.

Prinsepia utilis Royle.,(Rosaceae); Rowari.
Life form: Shrub

Locals use the seed oil to massage the affected parts to get relief from rheumatism and arthritis. Extract of root is given to treat dysentery.

Punica granatum Linn., (Punicaceae); Darooni,
Life form: Small tree
Fruit is effective against cough, cold, diarrhoea and dysentery. The fruit is a favourite drink among the locals and used as a heart tonic. Paste made out of fruits pericarp is applied on pimples and skin cracks.

Quercus leucotrichophora A. Camus, (Fagaceae); Banj,
Life form: Tree
Locals use seed of the plant for asthma and diarrhoea.

Ranunculus laetus Linn. (Ranunculaceae); Drilli,
Life form: Herb
Plant paste is used by the natives to get relief from rheumatism and gout.

Rosa brunonii Lindl., (Rosaceae); Kareer,
Life form: Shrub
Infusion of flowers is used to make the face pimple free; the root extract of the plant is used to wash the eyes to remove the eye troubles.

Rubus ellipticus Smith (Rosaceae); Peley Akhre
Life form: Shrub
Fruit juice is used locally for the treatment of fever, cough and sore throat. Root juice is used for the gastric troubles, diarrhoea and dysentery.

Rumex hastatus D. Don. (Polygonaceae); Khatti imli,
Life form:Under shrub
The juice of the plant is used by the locals to cure dysentery. The fresh tuber is chewed to relieve aches in the throat.

Rumex nepalensis Spreng. (Polygonaceae); Ulbul,
Life form: herb
Leaves of the plant after lubricating with desi ghee are applied externally on injuries and boils. Root paste is also applied externally to cure boils and other skin diseases

Solanum nigrum Linn., (Solanaceae); Kach mach
Life form:Herb
Root decoction is used to cure liver enlargement, piles and dysentry. Berries are used as domestic remedy for fever, diarrhoea, ulcers and eye troubles. Leaf juice is given to get relief of indigestion and colic pain.

Solanum surattense Burm., (Solanaceae); Kandiyari
Life form: Herb
Leaf juice is used externally against Rheumatism; root decoction is used internally to treat cough and asthma. Juice form berries is given to get relief from tooth ache. Seed made into paste is applied on boils and other skin problems.

Stellaria media (Linn.), (Caryophyllaceae); Koku, Phukku
Life form: Herb
Juice of herb is used for washing eyes, internal or external inflammation, cold, cough and rheumatism.

Taraxacum officinale Weber ex Wigg., (Asteraceae); Duddla
Life form: Herb
Crushed leaves are applied by the locals as dislocated joints to keep them flexible. Root powder used in bath after delivery to relieve body aches and joints pain.

Trichodesmum indicum (Linn.) ;(Boraginaceae); Rat mendhu, Ratpattru,
Life form: Herb
Paste of plant is applied externally to reduce joint swellings. The plant juice is taken orally to cure dysentery and fever.

Trifolium pratense Linn. (Fabaceae); Shattal,
Life form: Herb
Decoction made from plants is used against sore throat, cold and cough.

Verbascum thapsus Linn. (Scrophulariaceae); Bantamakoo,
Life form: Herb
Leaf used to cure cold and dysentery. Leaf is also smoked by the locals to cure asthma. Flowers are used against chronic bronchitis. Tea made from leaves is used by the inhabitants to treat cold and dysentery.

Vitex negundo Linn. (Verbenaceae); Bana,
Life form: Small tree
Decoction of roots administered by the locals for 3 times a day for 3-4 days to cure cough, cold and fever. Leaf juice is used externally by the locals to get relief from rheumatic pains, inflammation and to heal the wound fastly. An ointment made from the plant juice is applied by the locals as a hair tonic.

Woodfordia fruticosa (Linn.) (Lythraceae); Dhain, dhataki,
Life form:Tree
Flower decoction is given orally in early morning empty stomach to cure dysentery and diarrhea. Paste made from flower is used for the treatment of cough.

Zanthoxylum armatum, (Rutaceae); Timbru,
Life form: Shrub
Bark and seed of plant is used as stomachic and antihelmintic. Oil obtained from dry fruits is used in tooth powder. Fruits are effective against toothache and fever.

Zizypus mauritiana Lamk., (Rhamnacea); Ber,
Life form: Shrub
Seeds are sedative. Roasted leaves are effective against cough and asthma.

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