

Medicinal Floristic Wealth at Aravalli Hill Range in Khanak (Haryana), India

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Abstract

This study reveals the medicinal flora at Aravalli hill range in Khanak (Haryana), India and its importance in treating various types of ailments. The medicinal plants, which the men are practising from the long time, comprise a link with the good health both of animal and human being. The people at the site were also aware about some of the plant and the ailments they treat. From the site a total of 80 medicinal plants as 15 trees, 08 shrubs and 57 herbs belonging to 32 different families and 74 Genus were noticed prove this site a rich source from the medicinal point of views. These plant species can be utilized to cure hundreds of diseases. The highest number of 37 species can be used to cure fever, 24 diarrhoea, 22 urinary problems, etc. The present study may helpful to create awareness among the people about the medicinal importance of the plants in general and at the study site.

Key words: - Aravalli hill, medicinal plants, health, ailments, awareness.

Introduction

The study site, i.e. Aravalli hill range is located at 28°54'N and 13.61°N latitude and 75°51'E and 33.22°E longitude in Khanak which lie in the southern part of Haryana, India. The climatic condition of the region is hot in summer and cold in winter. This area bears unreliable rainfall (Gupta and Pandey, 2008), storms and thundershowers (Murthy, 2009). This hill range is oldest in India and world. Due to lack of the specific research and awareness, the people at the concerned site are not getting full benefits from this ancient heritage. The help of the local people in this regard needs to be taken and documented. The plant at the site are facing threat of loss due to ignorance and various mismanagement activities of human being as overgrazing, timber and fuel wood harvesting, etc. The present paper aims to evaluate only the medicinal plants from the site and to know about their importance in treating various types of the ailments. The awareness and documentation about the medicinal floristic wealth or plants medicinal values will helpful in preservation of traditional medicinal practices and the plant wealth of the concerned site.

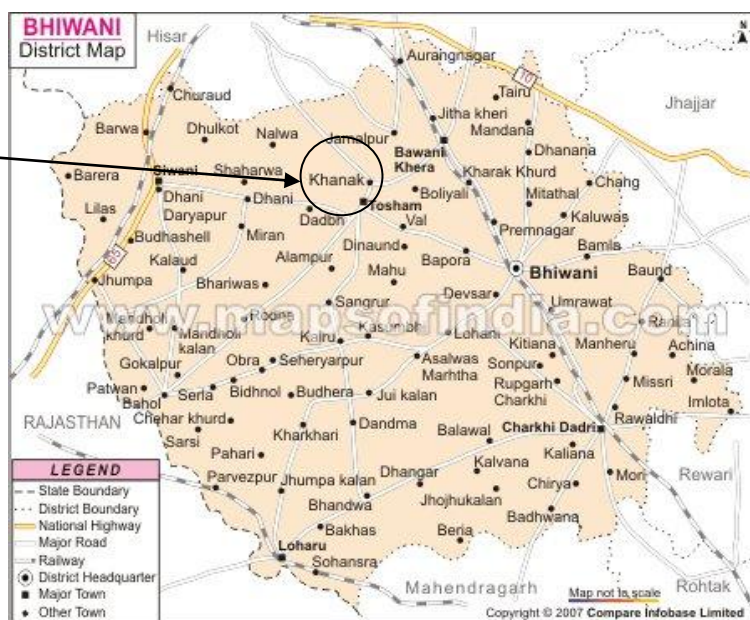
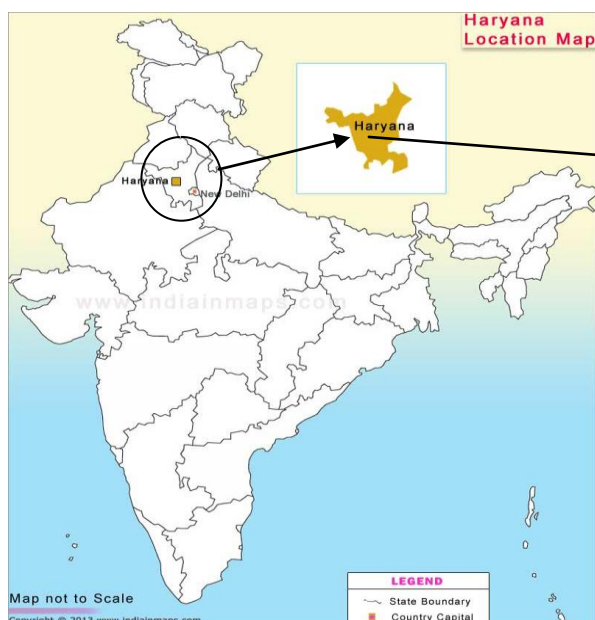


Figure 1: The figure shows the study site of Aravalli hill range in Khanak (Haryana), India.

The nature has bestowed human being with rich source of different plants are utilized for various purposes especially as medicines by ethnic people (Kumar *et al.*, 2012). The allopathic medicines which may cause serious side effects (Kala, 2005) have decreased the ethno medicinal knowledge of the people and the roles of plant from the medicinal point of views. Many studied have been carried out in India and abroad about medicinal importance of the plants as 26 medicinal plants (Sharma *et al.*, 2011), 32 different poisonous plant (Katewa and Galav, 2005), 47 species (Bhatti *at al.*, 2001), 243 genera belonging to 76 families (Jain *et al.*, 2005), 45 plant belonging to 29 families (Jain *et al.*, 2008), 395 species (Singh, 2012), 35 plant (Mohammed *et al.*, 2004) and various others (Afzal *et al.*, 2009; Khan, 2009; Lal and Singh, 2012; Hussain *et al.*, 2010; Ganesan *et al.*, 2008; Lawal and Uzokwe, 2010, etc.), but this study site is untouched regarding this matter.

Material and methods

The present paper is based on the study carried out during 2011-12. Due to not having any specific medicine man (Hakim) at the site, the local civilians were interviewed to get the medicinal importance of the plants. To get authenticity, the answers of the people were cross checked and found unsatisfactorily owing to lack of awareness, research and use of allopathic medicines in the region. The plants were sampled and were identified with the help of available literature (Jain, *et al.*, 2005; A. Shrivastava and Singh, 2009; Singh, 2011, etc.). The literature also provided all types of assistances to know about the medicinal properties (Jain *et al.*, 2010; Khadbadi and Bhajipale, 2010; Kumar *et al.*, 2011; Rathee *et al.*, 2010; Gaur, 2005; Vardhana, 2011; Yadav *et al.*, 2007; Kiruthika and Sornaraj, 2011; Kumar *et al.*, 2010; Thakur *et al.*, 2009; Khan and Ahmad, 2009; Patil *et al.*, 2012; Usha, 2012; Dabur *et al.*, 2007; Verma and Kumar, 2011; Raghu *et al.*, 2010, etc.) of the plants and their parts. The species were local named with the help of the civilian there, mainly shepherd boys.

Results and discussion

From the study site, 80 medicinal plants as 15 trees, 08 shrubs and 57 herbs belonging to 34 families and 74 Genera were noticed. The various types of ailments can be cured by making decoction, powder and paste, etc. from root, stem and leaves of specific plant.

Table 1: - The table shows plant with botanical and local name, family and medicinal use at the Aravalli hill range in Khanak (Haryana), India.

Botanical name/ Family	Local name	Medicinal use
<i>Acacia arabica</i> (Fabaceae)	Babul	Eye irritation, bleeding, conjunctivitis and diarrhoea.
<i>Acacia nilotica</i> (Fabaceaa)	Kikar	Fever, diabetes, hypersensitive, fungal diseases.
<i>Acacia senegal</i> (Fabaceae)	Pahdi Jandi	Leprosy, bronchitis, gonorrhoea, typhoid, Bleeding, diarrhoea and fever.
<i>Ailanthus excels</i> (Simaroubaceae)	Kabli Neem	Fever, asthma, dysentery, bronchitis, diarrhoea, diphtheria, skin diseases, blood purifier and stomach problems.
<i>Albizia lebbek</i> (Fabaceae)	Siris	Ulcer, eye infection, hernia, lung problems and cough.

<i>Balenite aegyptiaca</i> (Zygophyllaceae)	Marehlan	Yellow fever, syphilis, jaundice and liver problem.
<i>Boswellia serrata</i> (Burseraceae)	Saahlar	Cancer, bronchial spasm, rheumatoid, arthritis and ulcerative colitis.
<i>Capparis deciduas</i> (Capparaceae)	Kair	Asthma, cough, fever, cardiac problems, anti-hypertensive, anti-microbial, anti-hermitic.
<i>Crateva religiosa</i> (Capparidaceae)	Pahdi Peepli	Wound, laxative, antipyretic, antimicrobial, periodic, rheumatic, hermitic and contraceptive.
<i>Dalbergia sissoo</i> (Fabaceae)	Sisham	Blood diseases, fever, leprosy, gonorrhoea, pimples, skin diseases, leucorrhoea, acidity, jaundice, eye pain and breast swelling.
<i>Ficus religiosa</i> (Moraceae)	Peepal	Skin disease, wound, fever, paralyses, tuberculosis, gonorrhoea, dysentery, burns, haemorrhoid, cooling, vomiting and asthma.
<i>Melia azadirachta</i> (Meliaceae)	Neem	Toothache, skin diseases, bacterial, gonorrhoea, piles, gingivitis and pyrexia.
<i>Prosopis cineraria</i> (Fabaceae)	Jandi	Anti-fungal and anti-bacterial activities.
<i>Salvadora oleoides</i> (Salvadoraceae)	Jaal	Anti-fungal activities against certain pathogens.
<i>Ziziphus mauritian</i> (Rhamnaceae)	Badberi	Diarrhoea, cancer, fever, wound, eye diseases, ulcer and jaundice.
Shrubs Species		
<i>Abutilon indicum</i> (Malvaceae)	Peeli Buti	Headache, diabetes, gonorrhoea, cough, leprosy, fever, diuretic, ulcer, diarrhoea, bronchitis, urinary and wound.
<i>Aerva tomentosa</i> (Amaranthaceae)	Bui	Headache, rheumatism, abdominal worms, inflammation and skin infection.
<i>Clerodendrum multiflorum</i> (Lamiaceae)	Arni	Constipation, dysentery, nervous disorder and stomach pain.
<i>Commiphora wightii</i> (Burseraceae)	Gugal	Ulcer, obesity, oedema, liver disorder, leucoderma and urinary problems.
<i>Grewia tenax</i>	*	Bone fracture, diarrhoea, nausea, fever, dysentery, anaemia

(Malvaceae)		and body strengthening and weakness.
<i>Phragmites australis</i> (Poaceae)	*	Diabetes antiseptic, hypertensive viral diseases.
<i>Prosopis juliflora</i> (Fabaceae)	Kabuli Kikar	Cancer, asthma, leprosy and dysentery.
<i>Ziziphus numularia</i> (Rhamnaceae)	Jhadi	Mental retardation, diarrhoea, dysentery, fever, wound, anaemia, hysteria, cold, burns and bronchitis.
Herb species		
<i>Achyranthes aspera</i> (Amaranthaceae)	Ulta Bharut	Asthma, allergy, pneumonia, piles, snake biting, skin diseases, ulcer, dysentery and diarrhoea.
<i>Adiantum incisum</i> (Pteridaceae)	*	Diabetes, skin diseases, internal burning, fever, cough and cold.
<i>Amaranthus spinosus</i> (Amaranthaceae)	Cholaai	Stomach pain, diarrhoea, fever, dysentery, urine related, wound, burn, gonorrhoea, digestive, menstrual disorder and malaria.
<i>Aristida adscensionis</i> (Poaceae)	Pahadi Ghas	Improving lactation.
<i>Artemisia caudate</i> (Asteraceae)	Barna	It possesses antioxidant property.
<i>Boerhaavia diffusa</i> (Nyctaginaceae)	Santi	Diabetic, night blindness, swelling, anaemia, urinary trouble, worm infestation, malaria fever, asthma, jaundice, cough and pain.
<i>Brachiaria ramosa</i> (Poaceae)	Ghas	Increasing milk production in animals.
<i>Cardiospermum halicacabum</i> (Sapindaceae)	Teen Patiya bel	Itchy skin, nervous diseases, earache, rheumatism, swelling, snakebite.
<i>Cenchrus ciliaris</i> (Poaceae)	Anjan	Body pain, urinary problems, menstrual disorder and intestinal worm.
<i>Cenchrus echinatus</i> (Poaceae)	*	Inflammation, intestinal, skin, liver, gallbladder, tumour and urinary diseases.
<i>Chenopodium album</i>	Bathua	Anaemia, fever, cough, piles and intestinal worms.

(Amaranthaceae)		
<i>Citrullus colocynthis</i> (Cucurbitaceae)	Gadumba	Diabetes, digestive disorders, asthma, prevent pregnancy and for abortion.
<i>Cleome gynandra</i> (Capparaceae)	*	Diabetes, cancer, pain, improves eye sight, scurvy and recommended for pregnant women.
<i>Cocculus pendulus</i> (Menispermaceae)	Pilwani Bel	Poisonous bite, fever and skin diseases.
<i>Colotropis procera</i> (Asclepiadaceae)	Aakta	Inflammation, pain, tumour, diarrhoea and malarial.
<i>Commelina benghalensis</i> (Commelinaceae)	*	Burn, skin diseases and conjunctivitis.
<i>Convolvulus arvensis</i> (Convolvulaceae)	Bel Dhole phool	Jaundice and mumps.
<i>Conyza canadensis</i> (Asteraceae)	*	Diarrhoea and kidney disorders.
<i>Cucumis callosus</i> (Cucurbitaceae)	Kachari	Improve digestion, gastrointestinal problems like vomiting, constipation and stomach pain.
<i>Cymbopogon jwarncusa</i> (Poaceae)	Pahadi Ghas	Cough, backache, tuberculosis, asthma, rheumatic, toothache, fever and skin diseases.
<i>Cynodon dactylon</i> (Poaceae)	Doob Ghas	Diarrhoea, dysentery, urinary disorder, headache, hypertension, tumours, cough, stones, wound, hysteria, snakebite, cancer and measles.
<i>Cyprus rotundus</i> (Cyperaceae)	Dila Ghas	Blood disorder, dysentery, diarrhoea, bronchitis and leprosy.
<i>Dactyloctenium aegyptium</i> (Poaceae)	Makda Ghas	Stomach pain in women after child birth, fever.
<i>Datura metel</i> (Solanaceae)	Dhaturo	Bronchitis, asthma, skin disease, diarrhoea, pain and fever.
<i>Desmodium gengeticum</i> (Fabaceae)	Kondhra	Fever, asthma, snake biting, bronchitis and dysentery.
<i>Desmostachya bipinnata</i> (Poaceae)	Daabh	Cholera, piles, jaundice, rheumatism, dysentery, skin diseases and diarrhoea.

<i>Dicoma tomentosa</i> (Asteraceae)	*	Blood problems.
<i>Echinops echinatus</i> (Asteraceae)	Pahdi Kandai	Cough, diuretic, kill lice from hair, painful delivery and fever.
<i>Eleusine indica</i> (Poaceae)	Chaar Sirtia	Food poisoning, broken bones and fever.
<i>Euphorbia hirta</i> (Euphorbiaceae)	Dudhi	Asthma, bronchitis, coryza, pimples, female disorders, diarrhoea and dysentery, increases lactation, cough, body pain, wound and fever.
<i>Evolvulus numularius</i> (Convolvulaceae)	*	Bacterial diseases.
<i>Fagonia indica</i> (Zygophyllaceae)	Dhaman	Stomach pain, asthma, fever, cancer, toothache and kidney and urine disorder.
<i>Galega officinalis</i> (Fabaceae)	*	Diabetes, diuretic, increase breast milk production, fever and improve digestion.
<i>Heteropogon contortus</i> (Poaceae)	*	Malaria, stomach pain, snake biting, painful menstruation and prevent bleeding during circumcision.
<i>Ipomoea pestigridis</i> (Convolvulaceae)	Jhad Bel	Headache, snake biting, swelling and body pain.
<i>Leptadenia pyrotechnica</i> (Apocynaceae)	Khinp	Arthritis, cancer and inflammation.
<i>Leunaea nudicaulis</i> (Compositae)	Jangli Gobhi	Cough and bacterial diseases.
<i>Momordica balsamica</i> (Cucurbitaceae)	Jangli Karela	Fever, urinary bleeding, skin diseases, pain, diarrhoea, HIV, viral diseases and diabetes.
<i>Ocimum basilicum</i> (Lamiaceae)	Jangli Tulsi	Headache, diarrhoea, worms, kidney disorder, cough, constipation and diabetes.
<i>Ocimum canum Sims</i> (Lamiaceae)	Sadak Tulsi	Parasitic infestation, headache, fever, cold and inflammation of joints.
<i>Opuntia ficus indica</i> (Cactaceae)	Nagfani	Healing of wound, inflammation, urinary disorder and digestive.

<i>Parthenium hysterophorus</i> (Asteraceae)	Kangresh Ghas	Fever, dysentery, diarrhoea, urinary infection, pain, malaria and neurological disorder.
<i>Physalis minima</i> (Solanaceae)	Bambhola	Earache, ulcer, urinary problems, cough, fever and pain.
<i>Portulaca quadrifida</i> (Portulacaceae)	*	Gonorrhoea, dysentery, ulcers, inflammation, urinary disorders, asthma, skin diseases, and cough.
<i>Pupalia lappacea</i> (Amaranthaceae)	Gol Bharut	Healing the wound, teeth cleaning and dog bite.
<i>Ruellia patula</i> (Acanthaceae)	Phutkanda	Fever in children, anti-venom of tiger spider and cleaning teeth.
<i>Rynchosia minima</i> (Fabaceae)	Patiya Ghas	Abortion, wound healing, asthma and piles.
<i>Saccharum spontaneum</i> (Poaceae)	Jhund	Antioxidant and antimicrobial.
<i>Solanum surratense</i> (Solanaceae)	Dhindra	Kidney stone, urinary track problems constipation, cold, asthma, cough, indigestion, malaria, toothache, skin diseases, bronchitis, fever, chest complaint, abortion, influenza, and rheumatism.
<i>Tephrosia purpurea</i> (Fabaceae)	Bel Ghas	Diarrhoea, asthma, liver dysfunction, cold, ulcer, diuretic, skin diseases, cough, fever, wound, pimples, cancer and inflammation.
<i>Tribulus terrestris</i> (Zygophyllaceae)	Bhankhri	Cough, typhoid fever, piles, breathing problems, diabetes, heart disease, burn, urinary problems and for increasing testosterone.
<i>Tridax procambens</i> (Asteraceae)	*	Wound healing, jaundice, dysentery, liver disorder, diarrhoea, diabetes and fungal diseases.
<i>Typha angustifolia</i> (Typhaceae)	Patera	Diarrhoea, wound, menstrual pain, kidney stone and dysentery.
<i>Verbesina encelioides</i> (Asteraceae)	Bansla Gainda	Analgesic, antipyretic, emetic, anti-inflammation, insecticide and haemorrhoid.
<i>Vernonia cinerea</i> (Asteraceae)	*	Pain, diuretic, fever, anti-inflammation, diarrhoea, abortion, gastrointestinal, and kidney disorder.
<i>Withania somnifera</i>	Ashwgandha	Diuretic, stress, oedema, infertility, paralysis, rheumatism, tumor, ringworm, leucoderma, anorexia, arthritis, asthma,

(Solanaceae)		impotency, bronchitis, ulcer, diabetes, skin cancer, cold, cough, malaria, gastric and fungal diseases.
<i>Xanthium strumarium</i> (Asteraceae)	Bharut	Fever, digestive, laxative, tumour, malarial, stomachic, diuretic, diarrhoea, cancer, arthritis, tuberculosis, leprosy, rheumatism, leucorrhoea and constipation.
*Local name is not known.		

The medicinal floristic wealth of the concerned site indicates that among entire trees, shrubs and herbs, the 37 species are used in the treatment of fever, 24 in diarrhoea, 22 in urinary problems, 18 in various skin diseases, cough and asthma, 17 in dysentery, 14 species in healing of wound, 12 in diabetes, 11 in bronchitis, 10 in ulcer, 09 in cancer, 08 in rheumatic, 07 in burn, gonorrhoea, jaundice and malaria, 06 in cold, constipation, headache, kidney disorder, snake biting, piles, tumour, leprosy and stomach pain, 05 in liver disorder, digestion, eye diseases, female disorder and preventing blood flow, 04 in arthritis, abortion, anaemia, gastrointestinal problems, lactation, swelling, toothache and worm infestation, 03 in pimples, blood diseases and tuberculosis,

The 02 species are used in bone fracture, hysteria, leucoderma, nervous disorder, conjunctivitis, haemorrhoid, heart problems, laxative, leucorrhoea, paralysis, vomiting, oedema, earache and hepatic, 01 in acidity, cooling, diphtheria, gingivitis, hernia, hypercholesterolemia, hermitic, lung problems, osteoarthritis of knee, pyrexia, syphilis, typhoid, body strengthening and weakness, testosterone (increasing), mental retardation, nausea, stress, obesity, sedative, yellow fever, anorexia, bronchial spasm, chest complaint, cholera, coryza, cytotoxic, delivery (painful), dog bitten, emetic, gallbladder related, AIDS, impotency, influenza, infertility, joint pain, lice killing, measles, mumps, night blindness, neurological disorder, pneumonia, purgative, pregnant women, ringworm, scurvy and uterine diseases.

Conclusion

The concerned site is rich from medicinal floristic wealth point of views. The plant can be used in treatment of around hundreds (103) diseases. Except few, the entire people at the site are ignored about the so much medicinal uses of the plants indicate that, the traditional medical practices are going to disappear day by day. The present need is to create awareness among civilian there about such a treasure of medicines lying in their vicinity and a little efforts was also made in this regard. The flora at the site is also going depleting due its excess use and various mismanagement activities of human being. The use of the plants for medicinal purposes may also play an important role in conserving plant biodiversity from the study site.

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