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## Medicinal Plants of the Shimla hills, Himachal Pradesh: A Survey

**Kamal Jit Singh and Anil Kumar Thakur**

### ABSTRACT

Himachal Pradesh, located in the lap of the Himalayas, has varied climatic conditions due to variations in altitude and topography, which make this state a home for wide variety of plants. The Shimla hills have a rich repository of medicinal and other useful plants. The important biodiversity of medicinal plants of Shimla hills was surveyed between 2011 and 2013 at various places in Shimla and neighbourhood. Some of the important plants recorded were Malabarnut, Indian Horse Chestnut, Bracted Bugleweed, Aloe, Asparagus, Orchid Tree, Barberry, Bergenia, Indian Laburnum, Cedar tree, Indian Bay Leaf, Crepe Ginger, Datura, Indian Gooseberry, Spiked Ginger Lily, Yellow Jasmine, Walnut, Box Myrtle, Holy Basil, Oregano, Kakkar, Wild Himalayan Cherry, Wild Pomegranate, Rhododendron, Indian Madder, Himalayan Yew, Thyme, Himalayan Violet, Chaste Tree and Winged Prickly Ash etc..

**Keywords:** Shimla Hills, Medicinal Plants, Biodiversity, Shimla Flora, Useful Plants.

### 1. Introduction

Himachal Pradesh, located in the lap of the Himalayas, has varied climatic conditions due to variations in altitudes ranging from 450 meters to 6500 meters above mean sea level from west to east and from south to north. These wide variations in altitude, topography and climate have made this state a home for wide variety of plants and animals<sup>[1, 2]</sup>. The Shimla hills, located at 31.61°N 77.10°E, lie in the south-western ranges of the Himalayas<sup>[3]</sup>; have a rich repository of medicinal and other useful plants<sup>[4]</sup>. Most of these plants find their use in traditional medicine, folk uses and also in modern industry.

The Shimla Hills are rich in floristic diversity as is evident from the works of Sir Henry Collett in *Flora Simlensis*<sup>[4]</sup> and Lady Elisabeth Smith and H. Babington Smith in *Simla Flowers*<sup>[5]</sup>. The area is represented by 1326 species of plants belonging to 639 genera. This includes 1003 species of Dicotyledons belonging to 498 genera and 313 species of Monocotyledons grouped in 133 genera. The gymnosperms are represented by only 10 species and 8 genera. The proportion of species of Dicotyledons and Monocotyledons in the Flora of the world is about 81.3 and 18.7 percent, and 23.3 percent of Monocotyledons in Shimla is very high<sup>[3]</sup>.

Approximately 500 species of medicinal and 150 species of aromatic plants have been reported from the state. It represents quite a high percentage out of 3500 recorded plant species in Himachal Pradesh<sup>[2]</sup>. The local people used to depend on this floristic diversity for their daily needs including healthcare before the advent of modern time of industrialization and comfort. But with time, they have started using the readymade products, thus neglecting the traditional knowledge gathered by their forefathers. As no documented data is available solely for the medicinal and other useful plants of Shimla Hills, a survey and documentation of this aspect of floristic diversity of the area will be helpful to the common man, students, teachers, industry and finally science.

### 2. Study Area & Methodology

Shimla is located at 31.61°N 77.10°E in the south-western ranges of the Himalayas with altitude rising up to 2454 meters above mean sea level at the Jakhoo hill. The temperature ranges from -4 °C to 31 °C over the course of a year. The average total annual precipitation is 1575 mm. There is snowfall in the months of January and February in the high altitudinal ranges, but low lying areas experience only rains during that time. The climate is subtropical to warm temperate<sup>[6]</sup>.

The important biodiversity of medicinal and other useful plants of Shimla Hills was surveyed between 2011 and 2013 at various places like Shimla Catchment Area Reserve Forest

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and Wildlife Sanctuary, Glen, Summer Hill, Neri, Jakhu, Chhota Shimla Forest, Malyana, Shogi, Tara Devi and adjoining villages during various seasons. The plants/samples were identified with the help of herbaria, floras and manuals on Himalayas [7, 8] and Himachal Pradesh [2, 3, 9]. The collected data was compiled during the Associateship at Indian Institute of Advanced Study, Shimla. The medicinal and other uses for these plants were recorded from the available literature in books and journals.

### 3. Observations

A systematic enumeration of the plant species is given in alphabetical order of their botanical names along with their families. Besides this, information on English (E) and Hindi (H) names and the uses in available literature are given.

Botanical Name	Common Name(s)	Medicinal & Other Uses
<i>Achyranthes aspera</i> Linn. Family: Amaranthaceae	E: Prickly Chaff Flower, Chaff-Flower, Devil's Horsewhip H: Chirchita, Latjira, Apamarg, Puthkanda	Seeds are given in hydrophobia, snake bite and cutaneous diseases. Pulp of fresh leaves is applied on scorpion stings. Plants possess cardiotoxic, diuretic and anti-inflammatory activities. Roots are used as abortifacient in folklores [2, 10, 11, 12, 16].
<i>Ajuga integrifolia</i> Buch.-Ham. (Fig. 1) Syn.: <i>Ajuga bracteosa</i> Wall. Ex Benth. Family: Lamiaceae	E: Bracted Bugleweed H: Neelkanthi	Leaves are used as diuretic, febrifuge and tonic. Herb is also used in gout, rheumatism, palsy and amenorrhoea [2, 11, 12].
<i>Albizia julibrissin</i> Durazz. (Fig. 2) Family: Fabaceae	E: Mimosa tree, Persian/Pink silk tree, Tree of Happiness H: Barau, Kurmura, Lalsiris	Recently plant bark has been shown to exhibit Anti-obesity, anti-depression, anti-tumour and anti-angiogenic activity [13-15].
<i>Aloe vera</i> (L.) Burm. f. Syn.: <i>Aloe barbadensis</i> (L.) Webb. & Berth Family: Liliaceae	E: Aloe, Common Indian Aloe H: Ghikumari, Gvarapatha, Kumari,	Leaves are cooked and used for discomfort in stomach and jaundice. Gel is applied as an emollient for burning sensation of soles of the feet and also in treatment of burns. Also useful in band-aid for suppuration of boils and healing external injuries [2, 11, 12, 16].
<i>Asparagus adscendens</i> Roxb. (Fig. 3) Family: Liliaceae	E: Asparagus H: Satavar, Sahatrapaud	Tubers are cooling, demulscent and diaphoretic [16].
<i>Bauhinia variegata</i> Linn. Family: Fabaceae	E: Mountain Ebony, Orchid Tree H: Kachnar, Kaniar, Kural	Roots are considered carminative and its decoction prevents obesity. Bark is tonic, anthelmintic and used in ulcers and leprosy. Flowers and pods are pickled and used as vegetable [2, 11, 12, 16].
<i>Berberis asiatica</i> DC (Fig. 4) Family: Berberidaceae	E: Indian Barberry, Tree Turmeric H: Chitra, Darhaldi, Kashmal	Plants are reported to be blood purifier, cooling, laxative, diaphoretic, stomachic, tonic and for affections of the eye. Also useful in cholera, diarrhea, dyspepsia, enlargement of spleen, intermittent fevers, piles, rheumatism, skin diseases, stomach disorders, ulcers and vomiting during pregnancy [2, 12, 16, 17].
<i>Berberis lycium</i> Royle (Fig. 5) Family: Berberidaceae	E: Raisin Barberry H: Kushmal	Plants are used as an antidote for poisoning, antimalarial, antiseptic, blood purifier, carminative and febrifuge. Also used in bleeding piles, boils, chronic diarrhoea, ear problems, enlargement of liver and spleen, and urogenital disorders [2, 16, 17].
<i>Bergenia ciliata</i> (Haw.) Sternb. (Fig. 6) Family: Saxifragaceae	E: Frilly bergenia, Hairy bergenia H: Pashanbhed, Patharchat	Rhizomes and roots are considered astringent, diuretic and tonic. They are also used in fever and swollen joints. Crushed roots are applied to boils. It is an important drug for dissolving kidney and bladder stones [2, 12, 16].
<i>Boenninghausenia albiflora</i> (Hook.) Reichb ex. Meissn. (Fig. 7) Family: Rutaceae	E: White Himalayan Rue H: Pissumar Booti	Leaves are pounded and applied on cuts and wounds to speed the healing process. The leaves are also applied externally in the treatment of scabies. The leaf juice is dropped into wounds in order to kill germs. The leaf juice is said to relieve headaches when applied externally. Whole plant is placed under the pillow to relieve headaches. A decoction of the root is used in the treatment of malaria. The dried leaves are used as a flea repellent [18].
<i>Cedrus deodara</i> (Roxb.) Loud. Family: Pinaceae	E: Cedar H: Devdaru, Devdar	Wood is carminative, diaphoretic and diuretic. Also given in fever, flatulence, heart palpitation, paralysis, pulmonary troubles, and urinary diseases [2, 11].
<i>Cinnamomum tamala</i> Nees &	E: Cassia Cinnamon, Indian	Leaves are carminative and used as spice. They are also used

Eberm Family: Lauraceae	Cassia H: Dalchini, Tezpat	in cough, cold, bronchitis, asthma, tuberculosis and menstrual disorders [2, 16, 17, 19].
<i>Cissampelos pareira</i> Linn. (Fig. 8) Family: Menispermaceae	E: False Periera, Velvet Leaf H: Akaudi, Dekhnirbissi	Plants are reported to be anthelmintic, antidote against poisons, antilithic, antiperiodic, astringent, cardiac, carminative, diuretic, and expectorant. Leaf extract is also useful in asthma, cough, cold, diarrhea, dysentery, fever and indigestion. Roots are chewed for inflammation of skin. The decoction is considered abortifacient and stomachic [2, 12, 16, 17].
<i>Cuscuta reflexa</i> Roxb. Family: Convulvulaceae	E: Doddar H: Akashbel, Amarbel	A bath in warm decoction of stem is considered good to relieve swelling and rheumatic pains. Poultice of the plant paste is applied to cure red spots due to blood clotting. Massage of mustard oil boiled with powdered climber is good for internal injuries [12, 16].
<i>Datura stramonium</i> Linn. Family: Solanaceae	E: Apple of Peru, Devil's Apple, Devil's Trumpet, Mad Apple, Thorn Apple H: Dhatura	Flowers are considered sacred and offered to appease Lord Shiva. Inhalation of smoke of burning leaves is believed to cure asthma. Fruits are intoxicating. Powdered seeds are prescribed with cow's milk for fever [11, 12, 16].
<i>Elaeagnus umbellata</i> Thunb. (Fig. 9) Family: Elaeagnaceae	E: Autumn olive H: Ghain Ghyaeen, Ginhin	Plants are known to be used as astringent, cardiac, diuretic, haemostatic, and stimulant, for cough, dysentery and pulmonary affections. Fruits are edible and pickled [12, 16, 17, 20].
<i>Emblica officinalis</i> Gaertn. Family: Euphorbiaceae	E: Indian Gooseberry, Emblic Myrobalan H: Amla	Fresh fruits are rich source of Vitamin C. It is diuretic, laxative and cardiac and liver tonic. Useful in anaemia, diarrhoea, dyspepsia, haemorrhage, jaundice, leucorrhoea and menorrhoea [2, 11, 12, 16].
<i>Fagopyrum acutatum</i> (Lehm.) Mansf. ex K.Hammer (Fig. 10) Family: Polygonaceae	E: Perennial Buckwheat H: Ban ogal, Kanjolya	Leaves are cooked and eaten as vegetable. Grains are used in colic, choleric diarrhea and intestinal obstructions. The whole plant is considered anodyne, anthelmintic, carminative, depurative and febrifuge. It stimulates blood circulation [12, 16].
<i>Ficus palmata</i> Linn. Family: Moraceae	E: Fig Tree H: Anjir	Fruits are edible. Used as laxative and in diseases of lungs and bladder [12, 16].
<i>Habenaria intermedia</i> D.Don (Fig. 11) Family: Orchidaceae	E: Intermediate Habenaria H: Vridhi, Ridhi	Tubers are important constituents of many medicines in Indian System of Medicine, health tonic, astverga group (a combination of 8 rejuvenating herbs), and in preparation of Ayurvedic tonic 'Chyawanprash'. Tender leaves as well as tubers are edible and cooked as vegetables [11, 21].
<i>Hedychium spicatum</i> Smith (Fig. 11) Family: Zingiberaceae	E: Spiked Ginger Lily H: Kapurkachri	The rhizomes are aromatic, anti-arthritic, appetizer, cardiac stimulant, carminative, deodorant, hair tonic and stomachic. Also useful in cough, asthma, diarrhoea, dropsy headache, hair falling, liver complaints, rheumatism and skin diseases. Leaves are woven into mats [2, 11, 12, 16].
<i>Hypericum perforatum</i> Linn. (Fig. 13) Family: Hypericaceae	E: Saint John's Wort H: Basant	It is considered as anti-depressant, sedative, relaxing nervine and stimulant. Also used for curing old sores, eczema, and toothache. Considered as a poison for cattle, sheep and goat [11, 22].
<i>Jasminum humile</i> Linn. (Fig. 14) Family: Oleaceae	E: Yellow Jasmine H: Peeli Chameli, Pitmali, Seuni	The paste of leaves is applied locally in skin diseases, wounds and ulcers. Leaves are chewed in toothache. Flowers are considered cardiac tonic. Its paste is used in eye diseases. Also used as antidote in poisoning. Plant juice is useful in sinuses and fistulas [2, 11, 23].
<i>Juglans regia</i> Linn. Family: Juglandaceae	E: Walnut H: Akhrot	Leaves are given in leucorrhoea. Bark decoction has galactafuge, hypoglycaemic and anti-inflammatory properties. The kernel has aphrodisiac and vermifuge properties [2, 11, 23].
<i>Justicia adhatoda</i> Linn. (Syn.: <i>Adhatoda vasica</i> Nees, <i>A. zeylanica</i> Medik.) (Fig. 15) Family: Acanthaceae	E: Malabar Nut H: Arusa, Vasaka	Leaves are useful for curing coughs, colds and asthma. Also used in Rheumatism and anemia [2, 11, 12, 16].
<i>Lyonia ovalifolia</i> (Wall.) Drude Syn.: <i>Pieris ovalifolia</i> (Wall.)	H: Ayar, Airan Alhan	Infusion of young leaves and buds is used for coetaneous troubles. Leaves have insecticidal properties. Honey from the flowers is reported to be poisonous. Smoke of the plant causes

D.Don. Family: Ericaceae		inflammation of the eyes and face <sup>[11, 12, 16]</sup> .
<i>Malaxis acuminata</i> D.Don (Fig. 16) Family: Orchidaceae	H: Jeevak	The pseudobulbs are sweet, refrigerant, aphrodisiac, febrifuge and tonic. They are useful in fever, seminal weakness, burning sensations, tuberculosis and general debility <sup>[11, 24]</sup> .
<i>Mallotus philippensis</i> Muell. Arg. Family: Euphorbiaceae	E: Dyer's rottlera H: Kamala, Sindur	It is considered anthelmintic, anti-oxidant, aphrodisiac and blood purifier in small doses. In higher doses, causes nausea and vomiting. Used extensively in dyeing industry. Also used in scabies, ringworm, eczema, boils and bile troubles <sup>[2, 11, 12]</sup> .
<i>Myrica esculenta</i> Buch.-Ham. ex D. Don (Fig. 17) Family: Myricaceae	E: Box Myrtle H: Kaiphal, Kaifal, Kaaphal	Fruits are edible and prepared for making refreshing drink. Bark is considered carminative and antiseptic. Its decoction is useful in toothache, asthma, diarrhea, fever, dysentery, and bronchitis and lung affections <sup>[12, 16]</sup> .
<i>Ocimum tenuiflorum</i> L. Syn.: <i>Ocimum sanctum</i> L. Family: Lamiaceae	E: Holy Basil H: Tulsi, Ajaka	Oil from the leaves possess antibacterial and insecticidal properties. Seeds are useful in urinary troubles. Leaves are diaphoretic, stimulating and expectorant. Used in gastric problems, bronchitis and common cold <sup>[2, 11, 12, 16]</sup> .
<i>Origanum vulgare</i> Linn. (Fig. 18) Family: Lamiaceae	E: Origano H: Sathra, Ban Tulsi	Used for flavouring foods. Its oil possesses carminative, stomachic, diuretic, diaphoretic and ammenagogue properties. Also given as tonic in diarrhoea. Useful in toothache, bronchitis, cough, rheumatism and earache. Tablet prepared from leaves are given in bone fractures <sup>[2, 11]</sup> .
<i>Phytolacca acinosa</i> Roxb. Family: Phytolaccaceae	E: Phytolacca H: Jharka, Jalga	Tender leaves and twigs are cooked as vegetable. Roots have contraceptive properties <sup>[25]</sup> .
<i>Pinus roxburghii</i> Sarg. Family: Pinaceae	E: Himalyan long leaved pine, Three leaved pine H: Chir, Dhupasarala	Turpentine obtained from the plants is used in pharmaceutical preparations, perfumery and industry for disinfectants, insecticides and varnishes. It is used in the gangrene of lungs, flatulent colic and minor haemorrhages. It is used externally in lumbago, arthritis and neuralgia <sup>[2, 12, 16, 17, 19]</sup> .
<i>Pinus wallichiana</i> A. B. Jackson Family: Pinaceae	E: Five-leaved pine, Indian blue pine H: Kail.	Wood is considered to be the best in all the Indian Pines. Used as timber for houses and furniture. Yields excellent charcoal <sup>[12, 16]</sup> .
<i>Pistacia chinensis</i> subsp. <i>integerrima</i> (J.L. Stewart ex Brandis) Rech. f. (Fig. 19) Family: Anacardiaceae	E: Crab's Claw H: Kakra	Wood is used for furniture. Galls on the leaves are used in asthma, phthisis, other diseases of respiratory tract and dysentery. They are also employed in dyeing and tanning. Leaves are lopped for fodder <sup>[11, 12, 16]</sup> .
<i>Prinsepia utilis</i> Royle (Fig. 20) Family: Rosaceae	H: Bekhra, Bhekal, Dhatila, Jhatela, Karanga	Oil obtained from seeds is used for cooking and illumination. Oil is rubefacient and employed in rheumatism and pain due to fatigue. Wood is used for walking sticks and as fuel <sup>[12, 16]</sup> .
<i>Prunus cerasoides</i> D.Don. (Fig. 21) Family: Rosaceae	E: Wild Himalayan Cherry H: Pajja, Padam, Padmakh, Padmakashtha	It is considered anti-abortifacient, analgesic, carminative, conceptive, expectorant, febrifuge and tonic. Also useful in cough, cold, burning sensation of the body, seminal weakness and in pregnancy. Young twigs are crushed and soaked in water and taken internally to stop abortions. Seeds are used to remove stones <sup>[2, 11, 23, 26]</sup> .
<i>Punica granatum</i> Linn. Family: Punicaceae	E: Wild Pomegranate H: Daru, Darmu, Dadim	It is anthelmintic, astringent, cardiac tonic, cooling, expectorant, useful in brain affections, cough and cold and bleeding nose. Fruit juice is good source of Vitamin C and also used to make wine. Bark is used to expel tapeworms. Flowers yield a red dye. Rind is used in diarrhoea and dysentery. Flower buds are used in bronchitis <sup>[2, 11, 16, 23, 26]</sup> .
<i>Pyracantha crenulata</i> (D.Don.) M.Roemer (Fig. 22) Family: Rosaceae	E: Hawthorn, Napalis Firethorn H: Choota seb	Fruits have hypotensive, coronary vasodilator and cardiotonic properties. It is useful in myocardial weakness and hypertension <sup>[2]</sup> .
<i>Quercus glauca</i> Thunb. Family: Fagaceae	E: Blue Japanese Oak, Green Oak H: Banni	Wood is considered good for agricultural implements, walking sticks and as fuel. Leaves are used as fodder and also kept in woolens as repellent. Fruits and bark is considered useful in

		asthma. Also a good remedy for piles <sup>[12, 16]</sup> .
<i>Rhododendron arboreum</i> Sm. (Fig. 23) Family: Ericaceae	E: Tree Rhododendron, Rose Tree H: Burans, Brass	Flowers are used for making a refreshing drink. They have many medicinal properties. They are useful in amoebic dysentery, diarrhea, fever, rheumatism, wounds healing, headache and nose bleeding. Flowers are also used for making chutney, jams and squashes <sup>[2, 11, 16, 17, 19]</sup> .
<i>Rosa brunonii</i> Lindl. (Fig. 24) Family: Rosaceae	E: Himalayan musk rose H: Karer, Kuji, Kunja, Kuja, Kwiala	Considered useful in eye troubles, and perfumery. Poultice of roots is useful against joint pains <sup>[16]</sup> .
<i>Rubia cordifolia</i> L. (Fig. 25) Family: Rubiaceae	E: Indian Madder H: Majit, Manjit, Manjhist	Whole plant is considered antidote to scorpion sting. It has antiseptic, astringent, deobstruent, diuretic and vermifuge properties. It is also useful in amenorrhoea, bone fractures, inflammation, chest complaints, headache, hepatic obstructions, leucoderma, menstrual disorders, rheumatism, sinusitis, stomachache, ulcers, obstructions in the urinary passages and paralysis <sup>[2, 11, 16, 17, 19]</sup> .
<i>Rubus ellipticus</i> Sm. Family: Rosaceae	E: Himalayan yellow raspberry H: Anehhu, Hinsalu	Fruits are edible and mild laxative. Wood is suitable for gunpowder <sup>[12, 16]</sup> .
<i>Salvia moorcroftiana</i> Wall. ex. Benth. (Fig. 26) Family: Lamiaceae	E: Kashmir Salvia H: Kalijari, Thuth, Halu, Papra	Roots are used in cough and cold. Leaves are applied as poultice for boils, wounds and skin affections. Root is used externally in stomach pain <sup>[2, 11, 27]</sup> .
<i>Solanum nigrum</i> Linn. Family: Solanaceae	E: Black nightshade, Poisonberry H: Makoi, Kakamachi, Bandakh	It has antiseptic, diuretic, laxative and anti-dysenteric properties. Freshly prepared juice of the plant is effective in liver cirrhosis and opium poisoning. Leaves are used for the treatment of psoriasis, eczema, piles, syphilis, gonorrhoea, dropsy and liver and spleen enlargement. Berries are useful in fever, ulcers, eye troubles and diarrhea <sup>[2, 11, 16]</sup> .
<i>Spilanthes acmella</i> Murr. (Fig. 27) Family: Asteraceae	H: Akarkara	Flower heads are chewed for relief in throat affections and paralysis of tongue. Also used for stammering in children <sup>[11, 16]</sup> .
<i>Stephania glabra</i> (Roxb.) Miers. (Fig. 28) Family: Menispermaceae	H: Gindaru	Reported to be useful in asthma, body and headache, eye diseases, intestinal complaints, pulmonary tuberculosis, skin diseases, tumour in stomach and as psychoactive plant <sup>[11, 12, 16, 17]</sup> .
<i>Swertia paniculata</i> Wall. (Fig. 29) Family: Gentianaceae	E: Panicled Swertia H: Charaita	Decoction of the plant is used as tonic. Plant is also used as substitute for Chirayita in the treatment of malaria and other fever <sup>[11, 28]</sup> .
<i>Tagetes minuta</i> Linn. Family: Asteraceae	E: Wild Marrigold H: Gaindri, Jangli gainda	Flowers are used as stomachic, aperients, diuretic and diaphoretic. Volatile oil obtained from the plants has anti-inflammatory, hypotensive, spasmolytic and bronchialatory properties <sup>[2, 12]</sup> .
<i>Taraxacum officinale</i> Wigg. Family: Asteraceae	E: Dandelion, Fortune teller H: Kanphul, Dhoodhali	Rhizomes and roots constitute the drug taraxacum used as a mild laxative and increase the flow of bile. Also used as diuretic, stomachic, hepatic stimulant and tonic. Rhizomes and roots are used raw as salad. Leaves are consumed as vegetable. Leaves and flower heads are used in the preparation of beer and wine <sup>[11, 12, 16]</sup> .
<i>Taxus baccata</i> Linn. Family: Taxaceae	E: Yew, Common Yew H: Thuno, Barmi	Leaves are antispasmodic and used for nervousness, hysteria, epilepsy and stones. Tincture from young shoots is used for headache, giddiness, feeble and falling pulse, coldness of extremities, diarrhoea and severe billiousness. All parts of the plant except fleshy aril are poisonous. Taxol obtained from the needles has anticancerous properties <sup>[2, 11, 12, 16]</sup> .
<i>Thalictrum foliolosum</i> DC. (Fig. 30) Family: Ranunculaceae	E: Leafy Meadow Rue H: Mamira, Mamiri	Roots are valued for ophthalmia. Also used as diuretic, purgative, and bitter tonic during convalescence and dyspepsia <sup>[2, 11, 12, 16]</sup> .
<i>Thymus linearis</i> Benth. Family: Lamiaceae	E: Himalayan Thyme, Wild Thyme, Creeping Thyme	It contains essential oils including thymol having strong antiseptic properties. It is considered to be an excellent

	H: Jangli ajwain	expectorant, antispasmodic and carminative. It has been used to treat gastrointestinal problems, respiratory disorders and against hookworm [2, 11, 12, 16].
<i>Tinospora cordifolia</i> (Willd.) Miers Family: Menispermaceae	E: Tinospora, Heart leaved moonseed H: Giloe, Gulancha, Gulbel, Gurach	Decoction of fresh stems is considered good against rheumatic ailments and gonorrhoea. It is also anthelmintic, anti-arthritis, anti-periodic, anti-pyretic, aphrodisiac, bitter tonic, blood purifier, cardiac, carminative, digestive, diuretic and expectorant. Starch from plants is used in chronic diarrhea and dysentery. Stem and leaves are mixed with fodder to improve lactation in animals [2, 11, 12, 16, 23].
<i>Urtica dioica</i> Linn. Family: Urticaceae	E: Stinging Nettle H: Bichhu Booti	It has haemostatic properties. Used in uterine haemorrhage, nose bleeding and vomiting of blood. Also useful in sciatica and rheumatism. Roots are used to heal minor wounds. Tender leaves and shoots cooked as vegetable [11, 12, 16, 27].
<i>Valeriana jatamansi</i> Jones (Fig. 31) Family: Valerianaceae	E: Indian valerian, Jatamansi H: Mansi, Tagar, Sugandhbala, Mushakbala	It is considered useful in diseases of eye, blood and liver. It is also used as a remedy for hysteria, nervous unrest and emotional stress. Also considered useful in clearing voice and acts as a stimulant in fever and nervous disorder. The paste of its roots is applied on wounds for better healing [2, 12, 16].
<i>Viburnum cotonifolium</i> Don (Fig. 32) Family: Caprifoliaceae	H: Malyash, Thanena	It is reported to be useful in haemorrhage, menorrhagia and metorrhagia. Fruits are edible [16, 17, 19].
<i>Viburnum mullaha</i> Buch.-Ham. Ex D.Don. Family: Caprifoliaceae	E: Indian cranberry H: Mulla	It is rich source of Vitamin C, B <sub>2</sub> , E and minerals [29].
<i>Viola canescens</i> Wall. (Fig. 33) Family: Violaceae	E: Himalayan Violet H: Banafshah	Flowers and whole plants are used in cough, cold and asthma [12, 16, 30].
<i>Vitex negundo</i> Linn. (Fig. 34) Family: Verbenaceae	E: Chaste Tree H: Nirgundi, Bana, Sambhalu	It has anti-arthritis, vermifuge, cardiac demulcent, emmenagogue, expectorant, febrifuge and nerve tonic properties. Also useful in asthma, lung diseases, spleen enlargement, tonsillitis, sciatica and rheumatism. Dried leaves are put alongwith grains to protect from pests [2, 11, 12, 16].
<i>Woodfordia fruticosa</i> (Linn.), Kurz. (Fig. 35) Family: Lythraceae	E: Fire flame bush, Red bell bush, Woodfordia H: Dawi, Dhai Dhaura, Thawi	Flowers yield a red dye. Dried flowers are astringent and stimulant. Drugs prepared from flowers and fruits are used against bowel complaints, hemorrhages, menorrhagia, leucorrhoea and seminal weakness [2, 11, 12, 16, 30].
<i>Zanthoxylum armatum</i> DC. (Fig. 36) Family: Rutaceae	E: Winged leaf prickly ash H: Darmar, Tejbal, Tirmur, Tezmal, Timbur, Tumru	Bark, fruits and seeds are used as carminative, stomachic and anthelmintic. Stems exhibit hypoglycaemic activity. Fruits and seeds are employed as tonic in fever and dyspepsia. Fruits are used for dental problems and scabies [2, 11, 12, 16, 30].

\*E: English; H: Hindi





**Fig 4:** *Berberis asiatica*



**Fig 5:** *Berberis lyceum*



**Fig 6:** *Berginia ciliata*



**Fig 7:** *Boeninghausenia albiflora*



**Fig 8:** *Cissampelos pareira*



**Fig 9:** *Elaeagnus umbellata*



**Fig 10:** *Fagopyrum acutatum*



**Fig 11:** *Habenaria intermedia*



**Fig 12:** *Hedychium spicatum*



**Fig 13:** *Hypericum oblongifolium*



**Fig 14:** *Jasminum humile*



**Fig 15:** *Justicia adhatoda*



**Fig 16:** *Malaxis acuminata*



**Fig 17:** *Myrica esculenta*



**Fig 18:** *Origanum vulgare*



**Fig 19:** *Pistacia integerrima*



**Fig 20:** *Prinsepia utilis*



**Fig 21:** *Prunus cerasoides*



**Fig 22:** *Pyracantha crenulata*



**Fig 23:** *Rhododendron arboretum*



**Fig 24:** *Rosa brumonii*



**Fig 25:** *Rubia cordifolia*



**Fig 26:** *Salvia moorcroftiana*



**Fig 27:** *Spilanthes acmella*



**Fig 28:** *Stephania glabra*



**Fig 29:** *Swertia paniculata*



**Fig 30:** *Thalictrum foliolosum*



**Fig 31:** *Valeriana jatamansi*



**Fig 32:** *Viburnum cotinifolium*



**Fig 33:** *Viola canescens*

Fig 34: *Vitex negundo*Fig 35: *Woodfordia fruticosa*Fig 36: *Zanthoxylum armatum*

#### 4. Discussion and Conclusion

This report enlists 63 plant species found in the Shimla Hills. These plants have been reported to be used in 126 medical conditions in human beings. Maximum number of reported plants find their use as febrifuge (16 Species), diuretic (12 Species), in asthma (12 Species), carminative (12 Species), anti-rheumatic (11 Species), tonic (11 Species), anti-diarrhoeal (10 Species), in liver problems (10 Species), in cough and cold (9 Species), as anthelmintic (8 Species), antiseptic (7 Species), for wound healing (7 Species), as cardio-tonic (7 Species), for headache (7 Species), as laxative (6 Species), stomachic (6 Species), astringent (5 Species), for boils (5 Species), in bronchitis (5 Species), dysentery (5 Species), dyspepsia (5 Species), as expectorant (5 Species), in haemorrhage (5 Species) and urogenital problems (5 Species). One plant species i.e. *Taxus baccata* has anti-cancerous properties. *Stephania glabra* find its use for tumours in stomach. Besides, these plants also find their use as wood, fodder, fibre, in dyeing and tanning, vegetables, fruits, spices and flavouring agents, insecticides, flea repellent, terpenes etc. Only a few of plants are used in Pharmaceutical industry. Elderly people of the nearby villages still know many of the uses of these plants but young generation is ignorant. According to World Health Organisation (WHO), 80% of the world population still rely on plant based medicines. Due to many side effects of modern allopathic medicines, plant based medicines may be popularized and traditional knowledge of plants and folk-medicine may be conserved. New generation may be sensitized and motivated to use natural products. Further research may be promoted and carried out on medicinal plants for the welfare of humanity.

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