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## Diversity, distribution, indigenous uses and conservation of medicinal plants in central Himachal Pradesh, North Western Himalaya

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### Abstract

Indian Himalayan Region (IHR) is the rich repository of medicinal plants. Inhabitants are largely dependent on the forest resources particularly on medicinal plants. The present paper is an attempt to assess the medicinal plants diversity of Central Himachal Pradesh of North Western Himalaya. A total of 400 species of medicinal value belonging to 111 families and 303 genera were recorded. Different plant parts were utilized, of which leaf (161 spp.) was used in the majority of cases. 169 species were natives and 231 non-natives. Maximum number of native (148), non-native (157) and near-endemic (40) species were found between 1800-2800m amsl, 02 species (*Pimpinella acuminata* and *Angelica glauca*) were found endemic to the Indian Himalayan Region. Maximum species (71) were used for fever (71), followed by wounds (55), skin problems (53), dysentery (5) and Headache (26). Due to over exploitation and habitat degradation the population of many species is decreasing fast.

**Keywords:** Medicinal plants, diversity, indigenous uses, Himachal Pradesh

### 1. Introduction

Health care and botany have evolved as an inseparable domain of human activity, the medicine man (Vaidya) is often regarded as the first botanical professional in human history. Whereas western medicine, as taught in most medical schools around the world, has largely switched from natural to manufactured drugs. Plant products are still of paramount importance in traditional health care systems of developing countries. Traditional healers are also skilled botanists and have a great talent for locating the requisite plant from the green vastness that makes up their natural pharmacy. Today's younger generations often have very different ambitions and, therefore, these traditional skills are doomed to get lost even faster than the plants themselves. In non-hospital care, in most developing countries, traditional and modern systems operate independently without a clear hierarchy, whereas in rural areas only traditional healing and herbal self-care may be at hand. In these countries, there is a great demand for medicinal plants that often come from the forests. Himachal Pradesh, one of the pioneer Himalayan states, is a rich repository of medicinal wealth, which occupies an important place in vedic treaties. The major population of Indian Himalayan Region lives in rural areas and the inhabitants are largely dependent on forest resources for their livelihood. The dependence of humans and livestock on this rich plant diversity is well known phenomenon since time immemorial (Samant & Dhar 1997; Samant *et al.*, 1998a) <sup>[11]</sup>. The rich plant diversity of the IHR has been utilized by the natives in various forms such as medicine, food (edible), fuel, fodder, making agricultural tools, house building, small scale enterprises (i.e., basket, mat, hat, kilta, etc.), and religious ceremonies (Samant & Dhar, 1997) <sup>[11]</sup>. 1,748 species of medicinal plants (Samant *et al.*, 1998a), 675 species of wild edibles (Samant & Dhar, 1997) <sup>[11]</sup>; 279 species of fodder (Samant, 1998 a,b) <sup>[10, 14, 16]</sup>; 118 species of essential oil yielding medicinal plants (Samant & Palni, 2000) <sup>[12]</sup>; and 155 species of sacred plants (Samant & Pant, 2003) have been reported from the IHR. Due to habitat degradation, over exploitation and changing environmental conditions, the biodiversity of the region is decreasing rapidly (Samant *et al.* 1998 a,b) <sup>[10, 14, 16]</sup>. Extinction of these species may cause biodiversity reduction, habitat loss, and alteration of natural ecological processes (Vitousek, 1990; Levine *et al.*, 2003; Serrill, 2006) <sup>[23, 6, 18]</sup>. 142 species have been recorded in the Red Data Book of Indian Plants (Nayar & Sastri, 1987, 1988, 1990) <sup>[7, 8, 9]</sup> and about 120 species of medicinal plants have been assessed for various threat categories of the (International Union for Conservation of Nature) (Ved *et al.*, 2003, 2005) <sup>[23, 24]</sup>.

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## 2. Material and Method

### 2.1 Study area

The study area comprises of two districts namely Mandi and Hamirpur of Himachal Pradesh. The area lies between lat. 31°-13'-50" and Long. 77°-23'-15" and falls largely under the subtropical, temperate, sub-alpine and alpine regions of the Himachal Pradesh (Fig.1). The altitude ranges from 800-

4,100m amsl. It is surrounded by two main rivers namely, Beas and Satluj. The area is veritable emporium of economically important floristic diversity including medicinal plants. Climate varies from sub tropical to alpine types. The vegetation comprises sub-tropical, temperate, sub-alpine and alpine types. The inhabitants are largely dependent on floristic diversity for their sustenance.

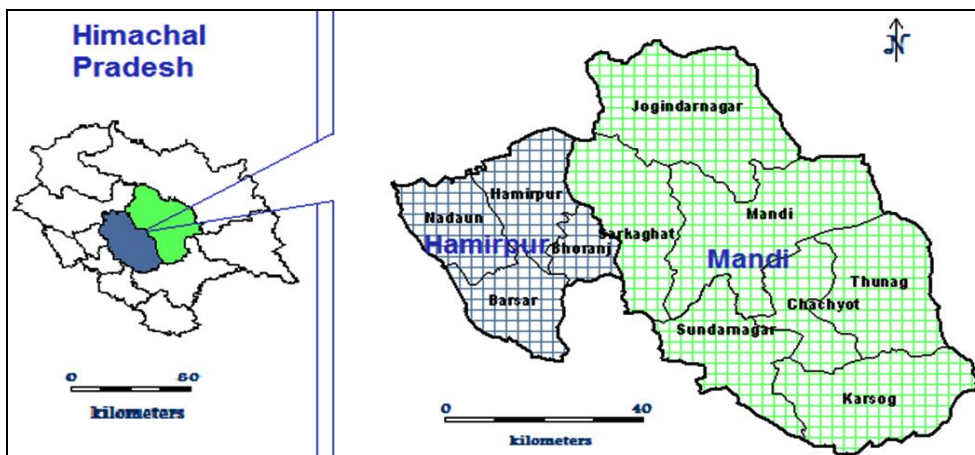


Fig 1: Map of the Study area

### 2.2 Data collection

For the assessment of medicinal plants, surveys were conducted in the selected villages along an altitudinal gradient. Local knowledgeable people including Vaidyas were interviewed and information on indigenous uses was generated. The interviews were mostly individual. Interviews followed informal method and open ended rather than a strict questionnaire. The language used while interacting with the informants was the local dialect, Mandiyali and in certain cases, Hindi also. The samples of economically important plants were collected from their natural habitats with the help of a local knowledgeable hired person for further identification. Fresh samples of the species were collected and identified with the help of local and regional floras (Chowdhery & Wadhwa, 1984; Aswal & Mehrotra, 1994; Dhaliwal & Sharma, 1999; Singh & Rawat, 2000; 2000; etc.) [3, 2, 4, 22]. Some of the species of medicinal plants are not used by the natives, but their uses as medicine are known from other parts of the State and IHR. Such species have also been included under medicinal plants. The information was compiled and analyzed for the utilization pattern following Jain (1991); Samant & Palni (2000) [12]; Samant *et al.* (2001b, 2007a&b). Nativity of the species was identified following Anonymous (1883-1970) [1] and Samant (1998a), while the endemism of the species was identified on the basis of distribution of the species (Dhar & Samant, 1993; Samant, 1999) [5]. The species restricted to Indian Himalayan region were considered as endemic, whereas the species with extended distribution to neighbouring countries were considered as near endemic (Samant *et al.*, 1998a).

## 3. Results

### 3.1 Diversity and Distribution Pattern

Total 400 species (Angiosperms: 386; Gymnosperms: 04; Pteridophytes: 10) of medicinal plants belonging to 303 genera and 111 families were recorded. Of these, 49 species were trees, 79 shrubs and 276 herbs. Asteraceae (36 spp.); Lamiaceae (26 spp.); Rosaceae (18 spp.); Fabaceae (18 spp.); Ranunculaceae (14 spp.) were the dominant families. Among the genera, *Persicaria* (05 spp.); *Hypericum*, and *Ficus* (04

spp.) and *Artemisia*, *Impatiens*, *Berberis*, *Terminalia*, *Rosa* and *Viola* (03 spp., each) were species rich genera. Maximum richness of medicinal plants (Total 305 spp; herbs: 194; shrubs: 64; trees: 47) were reported in the altitudinal range, 1800-2800m and decreased with increasing altitude (Fig.2). Some of the important medicinal plants of the altitudinal zone, <1800m,amsl were *Ageratum conyzoides*, *Arisaema tortuosum*, *Cryptolepis dubia*, *Centella asiatica*, *Calotropis procera*, *Rauvolfia serpentina*, etc. 1800-2800m,amsl were *Heracleum candicans*, *Arisaema jacquemontii*, *Aristolochia dilatata*, *Asparagus filicinus*, *Acorus calamus*, *Berberis aristata*, *Dioscorea deltoidea*, *Swertia angustifolia*, *Aesculus indica*, *Ajuga bracteosa*, *Habenaria edgeworthii*, *Prinsepia utilis*, *Rubus biflorus*, *Boeninghausenia albiflora*, *Bergenia ligulata*, *Verbascum thapsus*, *Urtica dioica* etc; 2801-3800m,amsl were *Astragalus himalayanus*, *Corydalis cornuta*, *Morina longifolia*, *Swertia cordata*, *S.ciliata*, *Tanacetum dolichophyllum*, *Malaxis muscifera*, *Plantago himalaica*, *Podophyllum hexandrum*, *Skimmia laureola*, *Picrorhiza kurroo*, *Trillidium govanianum*, *Valeriana jatamansi*, *Viola biflora*, etc; and >3800m,amsl *Allium humile*, *Allium wallichii*, *Euphrasia himalaica*, *Pedicularis pectinata*, *Rhodiola heterodonta*, etc. (Appendix 1).

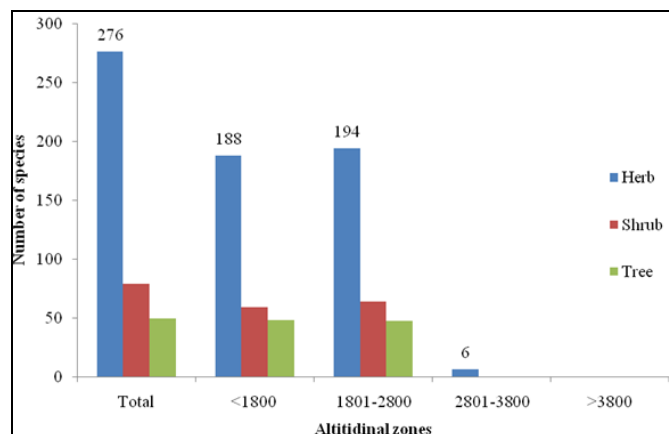
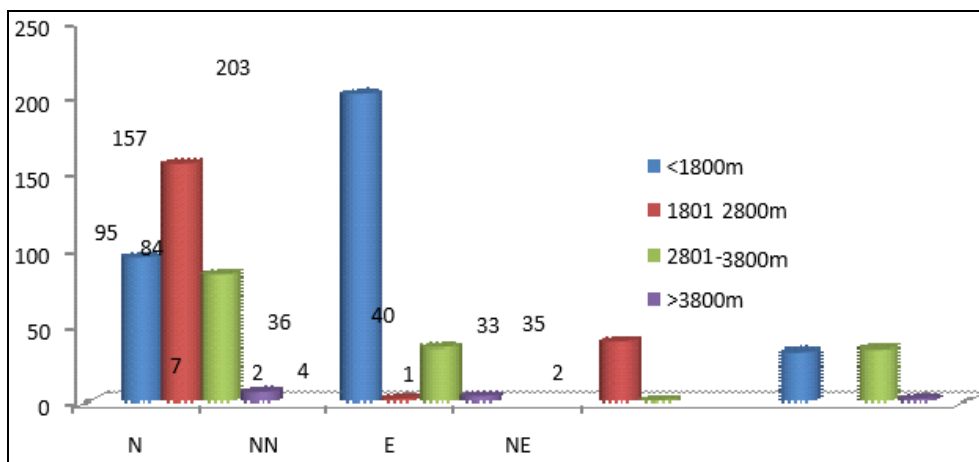


Fig 2: Altitudinal distribution of medicinal plants in Central Himachal Pradesh. Abbreviations Used: Tr=Tree; Sh=Shrub; H=Herb

### 3.2 Nativity and endemism

Of the total medicinal plants recorded, 169 species were found natives to the Himalayan region and remaining species were non-natives (231 spp.). In addition to it, 02 species namely, *Angelica glauca* and *Pimpinella acuminata* were found endemic and 81 species were near endemic to the Indian Himalayan Region. In the zone 1800-2800m, amsl maximum number of natives (148 spp.), non-native (157 spp.)

and near endemics (40 spp.) species were distributed, followed of 2801-3800m, amsl with natives (84 spp.), non-natives (36 spp.) and near endemics (35 spp.). In addition to it, the endemic species was distributed at both the altitudinal range. The distribution of native, non-native, endemic and near endemic species in the different altitudinal zones has been presented in the Fig. 3. The proportionate native and endemic species increase with increase altitude.



**Fig 3:** Altitudinal distribution of native (N), non-native (NN), endemic (E) and near endemic (NE) species in medicinal plants in central Himachal Pradesh Abbreviations used: N=Native; NN=Non Native; E=Endemic; and NE=Near Endemic

### 3.3 Utilization pattern and Indigenous uses

The medicinal plants available in the area have been used to cure various ailments. and the maximum species (55 spp.), were used to cure dysentery followed by cough (54 spp.),

wounds (51 spp.), rheumatism (41 spp.), headache (26 spp.), Asthma (28 spp.), fever (23 spp.), bronchitis and blood purifier (17 spp., each), jaundice (12 spp.) and digestion (08 spp.) (Table 1).

**Table 1:** Utilization pattern of medicinal plants for curing various ailments/diseases

Sr. No.	Diseases	No.of Species	Sr. No.	Diseases	No of Species
1	Anti-cancerous	1	49	Heart problem	6
2	Anaemia	2	50	Inflammatory	3
3	Asthma	28	51	Insecticidal	1
4	Antidote	12	52	Indigestion	4
5	Aphrodisiac	8	53	Jaundice	12
6	Anthelmintic	9	54	Joint problem	2
7	Abdominal pain	6	55	Kidney	3
8	Antiperiodic	1	56	Laxative	11
9	Aetitizer	1	57	Llllleuciderma	8
10	Antifertility	1	58	Leucorrhea	2
11	Astringent	12	59	Leprosy	8
12	Blood purifier	17	60	Liver	12
13	Body pain	3	61	Lung	3
14	Boils	29	62	Malaria	9
15	Bronchitis	17	63	Menustral	1
16	Bone fracture	7	64	Menorrhoea	4
17	Burns	15	65	Nervous disorder	1
18	Cough	54	66	Nose bleeding	2
19	Cold	28	67	Piles	21
20	Cholesterol	1	68	Pimples	3
21	Cholera	11	69	Puragative	10
22	Constipation	5	70	Pulmonary	2
23	Cramps	3	71	Rheumatism	41
24	Colic pain	2	72	Sore	24
25	Convulsion	2	73	Stomachache	24
26	Cuts	26	74	Skin problems	53
28	Digestion	8	75	Scabies	6
29	Dysentery	54	76	Snake bite	24
30	Diuretic	17	77	Swelling	23
31	Dropsy	5	78	Stimulant	6
32	Dyspepsia	5	79	Syphills	4
33	Digestive disorder	5	80	Sedatives	3
34	Diabetes	3	81	Tonic	42

35	Debility	1	82	Toothache	19
36	Diarrhea	9	83	Tuberculosis	2
37	Eczema	10	84	Throat problem	7
38	Eye complaints	23	85	Ulcers	12
39	Epilepsy	10	86	Urinary Problem	13
40	Earache	13	87	Vomiting	2
41	Eruption	2	88	Veterinary	13
42	Emollient pectoral	1	89	Whooping cough	4
43	Febrifuge	8	90	Wounds	55
44	Fever	71			
45	Gastric	17			
46	Gout	3			
47	Headache	26			
48	Hair tonic	1			

Amongst the medicinal plants, bark of *Acacia catechu* (Khair) used in passive diarrhea usually in combination with *Cinnamon* and *Opium*. The leaves, flowers, fruits and roots of *Justicia adhatoda* (Safed basooti) we extensively used for treating cold, cough, whooping cough, chronic bronchitis and asthma. Roots and leaves of *Barleria cristata* (Sairyak) were used to reduce swellings, toothaches, anemia and inflammatory disorders. Bark of *Terminalia arjuna* (Arjun) was used in hypertension, heart attack, myocardial infarction, angina, coronary artery disease. fruits and seeds of *Zanthoxylum armatum* were used in toothache, cough, fever, itching leucoderma, piles and rheumatism; leaf of *Bergenia ligulata* (Pashan bhed) in treatment of boils, ulcers, kidney stone, cuts and wounds; roots of *Valeriana jatamansi* as antidote to sting of insect also in skin diseases.; roots of *Angelica glauca* for dysentery, gastric complaints, stomache complaints and vomiting; whole plant of *Pimpinella acuminata* for dysentery; bulbs of *Arisaema jacquemontii* (Kida aloo) in stomachache, skin diseases, ringworm; and rhizome of *Hedychium spicatum* in asthma, blood purification, bronchitis and nausea (Appendix 1). Different parts of the plants were utilized, of which the leaf was used in the majority cases (161), followed by whole plant (104 spp.), roots (108 spp.), fruits (68 spp.) and flowers (33 spp.) (Fig.4), (Appendix 1).

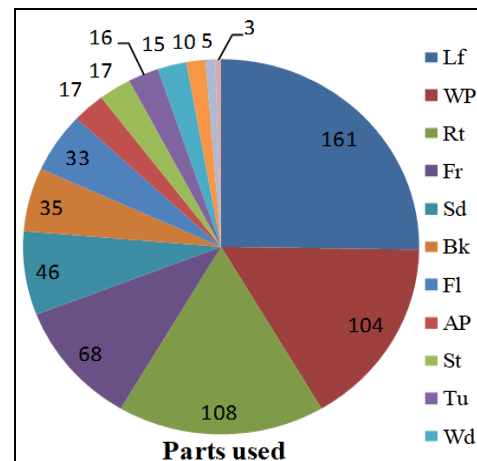


Fig 4: Statistics of plant parts used

**Abbreviations Used:** AP=Aerial Part; Bb=Bulb; Bk=Bark; Fl=Flower; Fr=Fruit; Frb=Fructing body; Frd=Frond; Inf=Inflorescence; Lf=Leaf; Res=Resin; Rh=Rhizome; Rt=Root; Sd=Seed; St=Stem; Tu=Tuber; and Wd=Wood

**Appendix:** Diversity, distribution, nativity, endemism and indigenous uses of medicinal plants in Central Himachal Pradesh

Family/ Taxa	Local Name	AR (m)	Habitat /s	LF	Nativity	Part (S) used	Indigenous uses
<b>Angiosperms</b>							
<b>Acanthaceae</b>							
<i>Andrographis paniculata</i> (Burm. f.) Nees	Kal-megh	900-1400	2,13	H	Ind or	WP	Decoction is given all fevers, cough and common cold, it is an ultimate drug for even fevers like chikunguniya
<i>Barleria cristata</i> L.		800-2000	1,2,3,4	H	Ind Or Burma	WP	Powder of roots, flowers given with honey in Anaemia, headache, swelling in legs powder of flowers also used in toothache
<i>Dicliptera roxburghiana</i> Nees		800-2300	1,2	H	Ind Or	WP	Juice of leaves is given twice a day to cure stomach infection
<i>Justicia adhatoda</i> L.	Saphed basooti, Basunti	900-1700	2,4,6,7	Sh	As Trop	WP	Powder of flowers and leaves given in Whooping cough, Chronic bronchitis and in bronchial asthma
<b>Achyranthaceae</b>							
<i>Achyranthes aspera</i> L.	Putkanda	800-2500	1,2,3,5	H	As Trop	WP	Crushed seeds with warm water are taken during piles. Fresh stem is chewed for toothache. Roots are applied as a paste around the joint to treat pain. Seed paste is used for snake bite. The burnt plant, ash along with mustard oil is applied to skin



							burns
<i>A. bidentata</i> Bl.	Putkanda	800-2000	1,2,5,9	H	Reg Trop	WP	Decoction is given in Blisters in mouth, cholera, scorpion sting, swelling, whooping cough
<b>Agavaceae</b>							
<i>Agave angustifolia</i> Haw.	Ramban	800-1600	2,4,5,6	Sh	Mexico	Lf	Cell sap is extracted and applied to burns, skin infections. Juice is helpful for digestive disorders.
<i>Yucca gloriosa</i> L.		1000-1500	2,3,4,5	Sh	Amer Bor	WP	Powder of wholeplant asthma, ulcers and leprosy
<b>Amaranthaceae</b>							
<i>Amaranthus spinosus</i> L.	Sariyara	1500-2500	1,9	H	Am Bor	Lf	Tea made from the leaves used for treatment of diarrhea and excessive menstruation
<i>Cyathula capitata</i> Moq.		1600-2000	1,4	H	Reg Himal	Lf, Sd	Decoction is given in Emetic, abortifacient
<i>C. tomentosa</i> (Roth.) Moq.		800-2200	2,3	H	Reg Himal	Rt, Lf	Paste of roots is used in Skin diseases
<i>Deeringia amaranthoides</i> (Lam.) Merr.	-	1000-1400	2,13	Sh	Reg Himal China	Lf, Fr, Sd	Decoction is given as Liver protective
<b>Alliaceae</b>							
<i>Allium humile</i> Kunth	Jangli lahsan, Farna	3200-4000	1,4	H	Ind Or	Lf	Tonic to the digestive system.
<i>Allium wallichii</i> Kunth	-	2500-4100	1,4	H	Reg Himal Prace	Lf, Bb	Crushed bulb used for purify the blood.
<b>Anacardiaceae</b>							
<i>Pistacia integerrima</i> Sw.	Kakare	800-2200	2,3	T	Reg Himal Aegypt Persia	Fr	Decoctions is used as to cure asthma, fever, appetite, irritability of the stomach, chronic pulmonary affection, dyspeptic, vomiting & diarrhea
<i>Rhus javanica</i> var. <i>roxburghii</i> (DC.) Rehder & E.H.Wilson	Titri	800-2200	1,2,3,4	T	Reg Himal China Ins Sandvic	Fr, Wd	Juice of fruit mixed with honey is given in Gastric problem and skin diseases
<b>Apiaceae</b>							
<i>Angelica glauca</i> Edgew.*	Chaura	2000-2800	1	H	Reg Himal	Rh, Rt	Mixer of dried root powder with sugar is given to cure fever and cold.
<i>Bupleurum falcatum</i> L.		1600-3050	1,3,4	H	Europe Oriens As Bor Reg Himal	Rt	Root extract is taken empty stomach to treat liver disorders.
<i>Centella asiatica</i> (L.) Urb.	Brahmi	800-1600	2,4	H	Reg Trop et Sub Trop	WP	The leaves are taken with sugar as a memory enhancer. The powder of the leaf is taken in the morning with water for cardiac disorder and blood pressure.
<i>Heracleum candicans</i> L.	Badiyacha	1800-2800	1,8	H	Reg Himal	Lf, Rt	Decoction of the stem and root is taken during fever. The paste prepared from the root is applied on snake bite. Powdered shoot taken with water during giddiness in animals.
<i>Hydrocotyle javanica</i> Thunb.		800-2000	1,5	H	Java	Lf	Whole plant juice used as a brain tonic, cures tonsils
<i>Pimpinella acuminata</i> (Edgew.) Cl.*		2500-3700	1,5	H	Reg Himal	WP	Decoction is give in Dysentery
<i>P. diversifolia</i> DC.		2000-3500	2,3,4,5	H	Reg Himal	Rt	Powdered roots cure foe digestive disorders,cold and cough.
<i>Pleurospermum angelicoides</i> (DC.) Cl.**		3000-3650		H	Reg Himal	Rt	Infusion given to reduce fever.
<i>Pleurospermum candollii</i> (DC.) Cl.		3000-3850		H	Reg Himal	Rt	Infusion given to reduce fever.
<i>Selinum wallichianum</i> (DC.) Raizada & H.O. Saxena**	Bhutkeshi	2800-3150	1,2	H	Reg Himal	WP	Root powder mixed with ghee is applied to cure swelling in the body after pregnancy.
<b>Apocynaceae</b>							
<i>Rauvolfia serpentina</i> (L.) Benth. ex Kurz	Sarp Gandha	800-1700	6	Sh	Ind Or Java	Rt	Root powder used in treatment of insomnia

<b>Araceae</b>							
<i>Acorus calamus</i> L.	Barin/ Bauch	800-2200	5	H	Reg Bor Temp	Rh, St, Lf	Rhizome rubbed with mother's milk to make a paste and licked to infant for immunity. Decoction made to cure cold and cough.
<i>Arisaema jacquemontii</i> Bl.**		2200-3300	1,2,3,4,5,6,7,8	H	Reg Himal	Bb	Rhizome paste mixed with oil is applied in sprains and regains muscular strength.
<i>A. tortuosum</i> (Wall.) Schott (Wall.) Schott	Biskaphar	800-2200	1,2,3,4,5	H	Reg Himal	WP	Used as a vermifuge in cattle, tuber juice applied to wounds of cattle to kill parasites
<i>Colocasia affinis</i> Schott	-	1200-1700	2,3,5,6	H	Reg Himal	Corm	A crushed dried bulb in the powder form is used for the treatment of jaundice.
<b>Araliaceae</b>							
<i>Aralia cachemirica</i> Dcne.**		2500-3050	2,3	H	Reg Himal	Rt	Powder of roots is given in Dysentery, gastric complaints, vomiting
<i>Hedera nepalensis</i> Koch.	Mathodi, Grumru	800-2500	1,2,3,5,7	Sh	Europe Afr Bor As Temp	Fr, Lf	Decoction used to treat skin diseases like itching and pimples
<b>Aristolochiaceae</b>							
<i>Aristolochia dilatata</i> Br.		1800-2500	1,2,3	Sh	Ind Or	WP	Decoction of whole plant is taken in colic pain and ulcers
<b>Asclepiadaceae</b>							
<i>Calotropis procera</i> (Aiton) Dryand.	Aak	950-1100	2,9,12	Sh	Peruv Afr Trop Ind Or	St, Bk, Rt	Leaf powder is consumed during liver malfunctioning
<i>Cryptolepis dubia</i> (Burm.f.) M.R.Almeida		800-1800	1,3	Sh	Ind Or	WP	A decoction of the stem is used as a supporting drug in paralysis; of the root bark in rheumatism
<i>Marsdenia roylei</i> Wt.**		1800-2500	2,5	H	Reg Himal	WP	Decoction of whole plant is given in Cold and gonorrhoea
<i>Vincetoxicum hirudinaria</i> Medik.	-	1500-2800	2,13	H	Europe Reg Cauc	WP	Juice applied to boils and pimples
<b>Asparagaceae</b>							
<i>Asparagus filicinus</i> Buch.-Ham. ex D.Don	Sansarpali	2000-2800	1,3	H	Reg Himal Burma	Tu, AP	Crushed roots, twigs and leaves are mixed and applied on stomach to cure menorrhagia. Tuber decoction is taken by women as a tonic after delivery.
<i>A. racemosus</i> Willd.	Sansarpali	800-1700	1,2	Sh	Ind Or Afr Trop Austr	Tu	Tuber decoction is taken by women as a tonic after delivery.
<b>Asteraceae</b>							
<i>Achillea millefolium</i> L.	Fye	1800-3050	1,2,3,6	H	Europe	WP	Paste made from leaves used for treating colds, fevers and to reduce menstrual pain. Fresh leaves applied directly to an aching tooth to relieve
<i>Ageratum conyzoides</i> L.		800-2000	1,2,4,9	H	Reg Trop	Lf, Rt, Sd, Fr, Fl	Juice applied on wounds help in clotting
<i>Ainsliaea aptera</i> DC.**	Durwa	2000-3050	1,2,3	H	Reg Himal	Rt	Leaf and stem paste is made and applied to fractures.
<i>A. latifolia</i> (D. Don) Sch.-Bip.		2000-3050	1,2	H	Reg Himal	Rt	Decoction of whole plant is given in Colic pain
<i>A. contorta</i> Hk.f.		1800-3500	1,2,3,4	H	Reg Himal	Fl	Paste of flowers used as antibacterial
<i>A. triplinervis</i> (Sims.) Cl.		1500-3100	1,2,3	H	Reg Himal	WP, Lf	Decoction of whole plant used as diuretic
<i>Arctium lappa</i> L.		2000-3050	6,8	H	Europe	Rt	Decoction of roots is given in gastric pain and paste used in burns
<i>Artemisia nilagirica</i> (Cl.) Pamp.	Kubsh	800-2700	1,2,3,4,5,7	H	Reg Temp Bor	Lf, Rt, Sd	Decoction of leaves is preferable for abortifacient. Paste prepared from the leaves is also applied on wounds to relieve pain.
<i>A. parviflora</i> Roxb. ex D.Don**		800-2200	1,2	H	Ind Or Burma	Lf, Rt, Sd	Infusion given to treat throat problem
<i>A. roxburghiana</i> Wall. ex Besser**	Drubaha	2000-3050	1,2	H	Reg Himal	Lf	Infusion for treatment of indigestion and nausea; root

							used to cure toothache
<i>Bidens biternata</i> Merr. & Sherf.		800-1600	2,4	H	Reg Trop	Fr, Lf, Fl, Rt	Tea of the leaves used to expel worms
<i>B. pilosa</i> L.		1500-2200	1,2,3,4,9	H	Ind Occ Am Austr	WP	Leaves chewed for the treatment of sore throat
<i>Blumea laciniata</i> (Roxb.) DC.		800-2000	2,4	H	Ind Or Malaya China	WP	Decoction is given for purifying blood
<i>Centipeda minima</i> (L.) A.Br. & Asch.		800-1700	1,2,4	H	As et Austr Trop Ins Pacif	Lf	Leaf helps to snuff during head colds.
<i>Cirsium wallichii</i> DC.**		1800-2500	1,2,3,4,5,6	H	Reg Himal	WP	Root powder taken with water helps to cure gastric problems early morning
<i>Conyza stricta</i> Willd.		800-2200	1,2,4	H	Ind Or Afr Trop	WP	Crushed leaves applied to swelled part and tied with a cloth for few days Bone fracture, swelling
<i>Cyathocline purpurea</i> Kuntz		800-1800	2,5	H	Ind Or	WP	Paste of whole plant is applied on head for relieving Headache, intermittent fever
<i>Erigeron bonariensis</i> L.		800-1700	1,2,5	H	Am Austr	Lf	Paste of leaves against skin diseases
<i>E. multiradiatus</i> (DC.) Cl.		800-2200	1,4	H	Reg Himal	WP	Decoction is used as tonic in renal and stomach pain
<i>Eupatorium adenophorum</i> Hort.Berol. ex Kunth		1400-3500	1,2,4	Sh	Jameic Maxic	Lf	Paste of leaves used for healing properties, and applied to healing of any kind of skin wound, burn, or scald even speeding recovery time after surgery.
<i>Galinsoga parviflora</i> Cav.		1500-2500	4,5	H	Mexic North Am	Lf	Leaves juice helps to coagulate the blood of fresh cuts and wounds
<i>Gerbera gossypina</i> (Royle) Beauv.**		1600-500	1,2,3,4	H	Reg Himal	Rt	Crushed roots given to cure gastritis problems
<i>Himalaiella heteromalla</i> (D.Don) Raab-Straube**		2200-2800	2,4	Sh	Reg Himal	Sd, Lf	Paste of seed is applied on the head for relieving headache
<i>Inula cappa</i> DC.	Gadush	1600-2500	1,2	H	Reg Himal Java China	Lf	Infusion of leaves taken in urinary complaints
<i>I. racemosa</i> Hk.		2200-3800		H	Reg Himal	Rt	The root counters excess stomach acid, peptic ulceration and gastritis. It is also applied externally to bruises, sprains, aching muscles, insect bites and skin inflammations
<i>Laphangium affine</i> (D.Don) Tzvelev		1900-2600	1,2,3,4	H	Reg Magell	Rt	To treat chest pain, paste of leaves is mixed with butter and rubbed over affected area
<i>L. luteoalbum</i> (L.) Tzvelev	Gorbagare	800-2500	2,8	H	Cosmop	Lf	Paste of leaves is used against skin diseases
<i>Pseudognaphalium hypoleucum</i> (DC.) Hilliard & B.L. Burt	Goi phul, Brunn	800-2200	1,2,3,4	H	As Trop	WP	The paste of whole plant can be used in an ointment for treating boils and abscesses.
<i>Senecio chrysanthemoides</i> DC.		2500-3700	3,7	H	Reg Himal	WP	Paste of leaves and roots given to cattle for the expulsion of gas from stomach
<i>S. graciliflorus</i> DC.**		2000-3050	1,2	H	Reg Himal	AP	Decoction of roots and flowers given in cholera and periodic fever
<i>Spilanthes acmella</i> (L.) L.	Akarkara	900-1500	2,3,4	H	Am Trop	Lf,Fl,Sd	Flower is used in toothache, fever, dysentery, cold and bronchitis
<i>Solidago virga- aurea</i> L.		1800-2800	1,2,3,4	H	Reg Bor Temp	WP	Paste of leaves and flowering tops applied to the wounds for their fast healing
<i>Sonchus asper</i> Hill.		800-2200	1,2,4	H	Cosmop	Lf	Infusion of leaves has been used in the treatment of diarrhea, fever, leprosy
<i>S. oleraceus</i> L.		800-1800	2, 4	H	Cosmop	Lf,	A tea made from the roots is used in the treatment of asthma

							and coughs
<i>Tanacetum dolichophyllum</i> Kitamura	Ghuggulu	3000-4000	1,4	H	Reg Himal Mexico	Lf	A tea made from the leaves is said to calm the nerves
<i>Taraxacum campyloides</i> G.E.Haglund		800-2800	1,2,4,5,7	H	Am Trop	WP	Plant infusion taken orally in the treatment of gall bladder, urinary disorders and gallstone
<b>Balsaminaceae</b>							
<i>Impatiens glandulifera</i> Royle		2200-3050	1,2,3,6,7	H	Reg Himal	Sd, Fl	Paste applied to burns.
<i>I. racemosa</i> Hk. f.**		1600-2700	5	H	Reg Himal	Sd, AP	Leaves paste is applied on wounds.
<i>I. scabrida</i> DC.**		800-2600	1,2,3,5	H	Reg Himal	Sd, WP	The extract is used to treat intestinal worms.
<b>Basellaceae</b>							
<i>Basella alba</i> L.	Alugbati	900-1300	2,11,13	H	As Trop	Rt,Lf	The leaf extract is used in wound healing activities.
<b>Begoniaceae</b>							
<i>Begonia picta</i> Sm.**		1500-2000	1,2,3	H	Reg Himal	Lf	Decoction used to cure Bristles on tongue, ulcer in mouth
<b>Berberidaceae</b>							
<i>Berberis aristata</i> DC.**	Kasmal	1800-2800	1,2,4,7	Sh	Ind Or	WP	Infusion obtained from dried stem, root bark and wood is used to relieve eye complaints and jaundice.
<i>B. asiatica</i> Roxb. ex DC.	Kasmal	800-1700	1,2	Sh	Reg Himal	WP	Dried flower juice is taken before a meal to cure gastric problems
<i>B. jaeschkeana</i> Schneid.**	Kasmal	2700-3050	1,2	Sh	Reg Himal	Rt, Fr	Infusion obtained from dried stem, root bark and wood is used to relieve eye complaints
<i>B. lycium</i> Royle**	Kasmal	800-2200	1,2,3,4,5	Sh	Reg Himal	Rt, Fr	Dried roots boiled in water and concentrated under low temperature and dried resulting in "Rasaont" which is used to cure eye infections. Also, this decoction of root with honey is used for the treatment of jaundice
<b>Betulaceae</b>							
<i>Alnus nepalensis</i> D.Don	Kosh	800-2200	1,5	T	Reg Himal	Rt, Lf, Bk	Bark decoction applied externally to treat swellings and body pains
<i>A. nitida</i> (Spach) Endl.**	Kosh, Kunish	1600-2500	5	T	Reg Himal	Lf, St	Paste of leaves used to cure Cuts and wounds
<b>Bombaceae</b>							
<i>Bombax ceiba</i> L.	Semal	800-1600	1,2	T	Am Austr	Rt, Bk	Ashes of root is mixed with water and taken in abdominal pain, acne, aphrodisiac, diarrhoea, cough and dysentery
<b>Boraginaceae</b>							
<i>Cordia dichotoma</i> G.Forst.	Lasooda	800-1400	6,11	T	Austr.	Fr, Lf, Bk	Crushed leaves mixed with honey recommended for constipation
<i>Cynoglossum glochidiatum</i> Wall.ex Benth.	Balraj	1200-4000		H		Rt	Infusion given to reduce fever, treatment of urinary complaints
<i>Cynoglossum wallichii</i> G.Don		800-3050	1,2,3,5,6,8	H	Ind Or Burma	Rt	Root is used in Dyspepsia and digestive disorders
<i>Cynoglossum zeylanicum</i> (Vahl) Brand		1200-3300	1,2,4,6	H	Ind Or Malaya	Lf, Rt	Infusion taken in Asthma, cough and vomiting
<i>Eritrichium canum</i> (Benth.) Kitam.	-	2700-3200		H	Reg Bor Ind Or	WP	Whole plant is used Facilitates children birth
<b>Brassicaceae</b>							
<i>Capsella bursa-pastoris</i> (L.) Medik		800-3050	1,2,4	H	Reg Temp	WP	Tea made from the dried herb considered remedy against haemorrhages
<i>Thlaspi arvense</i> L.		800-2500	1,4	H	Europe As Bor	WP	Aerial parts chwd to cure mouth sores
<b>Cactaceae</b>							
<i>Opuntia dillenii</i> (Ker Gawl.) Haw	Nagphani	980-1200	3,4,5,6	Sh	Am. Austr	Fr, Lf	Medicinal (Refrigerant, Gonorrhoea, ophthalmic, laxative, antipyretic,



							leucoderma, urinary complaints, tumours, piles, inflammations, anaemia, ulcers and the enlargement of the spleen
<b>Caesalpinaceae</b>							
<i>Bahunia vahlii</i> Wt. & Arn.	Torr	1200-1600	2,3,4	T	Ind Or	Bk, Lf	One teaspoonful of its aqueous extract of its roots is given thrice a day orally for the treatment of syphilis for three days.
<i>Caesalpinia bonduc</i> (L.) Roxb.		800-1600	1,2	Sh	Cosmop Trop	Rt, Sd, Lf, Bk	Pods are roasted and the powder is used as a substitute for quinine. The root bark has been used for relieving intestinal worms, fever, tumors, cough, amenorrhea
<i>Cassia fistula</i> L.	Chakvad	1000-1500	1,2,4,6,8	T	As Trop	Sd, Lf	The root is used in decoctions against fevers, diabetes, diseases of urinary system and constipation.
<i>Chamaecrista mimosoides</i> (L.) Greene	Patwa ghas	800-1800	2,4	H	Cosmop Trop	WP	The roots are used in the treatment of dysentery and stomach pains
<i>Tamarindus indica</i> L.	Imli	900-1800	1,2,3,5	T	As. et Afr Trop	Fr	The leaves and flowers are used to make a sweetened tea that is drunk by children as a remedy for measles
<b>Campanulaceae</b>							
<i>Campanula argyrot richa</i> Wall. ex DC.	-	2500-3000	2,4	H	Reg Himal	Fl	Flower infusion used in the treatment of constipation
<i>Cyananthus lobatus</i> Wall.	-	3200-4100	1,2	H	Reg Himal	Fl, Lf	They are laxative and dry up serous fluids, and are used in the treatment of various serous disorders and constipation
<i>Codonopsis ovata</i> Benth.		2000-2500	1,6	H	Reg Himal	Lf	Crushed leaves applied to swelled part and tied with a cloth, practice repeated for few days
<b>Cannabaceae</b>							
<i>Cannabis sativa</i> L.	Bhang	800-2000	1,2,4,6,9	H	As Centr Reg Himal Bor Occ	Lf, Bk, Sd, Fr, Fl, St	Warm seed oil is massaged on the affected parts in case of arthritis. The oil is used to cure paralysis and fever. Seed powder with warm water for reproductive disorders.
<b>Capparidaceae</b>							
<i>Capparis zeylanica</i> L.	Aradanda	800-1100	11,12	Sh	Ind Or	Rt,Lf,Fl	Decoction of root-bark used for vomiting and for improving the appetite leaves in boils, swellings, piles and rheumatism
<b>Caprifoliaceae</b>							
<i>Sambucus adnata</i> Wall.	-	2500-2710	1,5	H	Reg Himal	WP	The fruits are used to initiate vomiting to treat stomach disorders, to wash stomach to expel poisonous substances
<i>Viburnum cotinifolium</i> Don**	Dab	1600-2500	1,2,3,8	Sh	Reg Himal	Lf, Fr, Bk	Seed juice is given to treat typhoid and whooping cough.
<i>V. nervosum</i> D.Don**	Tilenal	2200-3050	1,7	Sh	Reg Himal	Bk,Wd, St	Decoctised bark used as a blood purifier and to regulate a woman's menstrual flow
<b>Caryophyllaceae</b>							
<i>Cerastium cerastoides</i> (L.) Brit	-	1500-3900		H	Reg bor temp	WP	Infusion given to reduce fever, treatment of urinary complaints
<i>Drymaria cordata</i> Edgew. & Hk.		800-2100	1,4,5	H	Cosmop Trop	WP	Decoction of whole plant is used in Asthma, burns, cold, dysentery and headache
<i>Gypsophila cerastiodes</i> D. Don**		1700-2700	1,2,3,4,7	H	Reg Himal	WP	he root is used in the treatment of jaundice, lung diseases, rheumatism and typhoid fever
<i>Sterllia media</i> (L.) Vill.	Bariyala	800-2000	1,7	H	Reg Temp	WP	Decoction believed to be useful in the treatment of chest complaints

<b>Celastraceae</b>							
<i>Euonymus tingens</i> Wall	Chopru / Jamana	1700-2200	1,4,7	T	Reg Himal	Rt, Bk, Lf	Infusion used in Dysentery, eye diseases and headache
<b>Chenopodiaceae</b>							
<i>Chenopodium album</i> L.		800-2500	1,4,6	H	Reg Temp et Trop	Lf, Sd	Decoction of seed and leaves are prepared to treat intestinal worms. Seeds chewed in the treatment of urinary problems
<b>Combretaceae</b>							
<i>Terminalia arjuna</i> (Roxb. ex DC.) Wt. & Arn.		1200-1700	2,11	T	Ind Or	Bk	The Decoction of bark is used as tonic to lowers blood pressure and reduces blood cholesterol levels
<i>T.bellirica</i> (Gaertn.) Roxb.		1200-1700	6,11	T	Ind Or Malaya	Fr	The fruit chewed is believed to cure cold, asthma and hoarse voice. The paste of the fruit is applied to the swollen skin.
<i>T.chebula</i> Retz.		1200-1600	11	T	As Trop	Fr	Powdered dried fruit made into a paste and taken with jaggery is malashodhana, removing impurities and wastes from the body
<b>Commelinaceae</b>							
<i>Commelina paludosa</i> Bl.		800-2000	4,7	H	Ind Or Malaya	WP	Paste is applied to insect stings
<i>Cyanotis cristata</i> (L.)D.Don		1500-2000	1,2,4	H	Ind Or Malaya	Rt,AP	Paste of plant is used in Veterinary diseases
<b>Convolvulaceae</b>							
<i>Evolvulus alsinoides</i> (L) L.	Sankhpushpi	800-1200	2	H	Amphitrop	WP	It is also used in the treatment of epilepsy, leukoderma, cuts and ulcers. Shankhpushpi is brain tonic and primarily used for improving brain functions
<i>Ipomoea quamoclit</i> L.	Nagarbel	1100-1500	2,13	H	Amphing Trop	Lf,Sd,Rt	Treatment of physical weakness, abnormal behaviour, sinking of voice, bleeding from cuts and wounds, piles, snakebites. Used as purgative.
<b>Coriariaceae</b>							
<i>Coriaria nepalensis</i> Wall.	Fanai	800-2000	2,4	T	Reg Himal China	St, Lf, Fr	Paste is applied on burns
<b>Crassulaceae</b>							
<i>Rhodiola heterodonta</i> (Hk. & Th.) A. Boriss.		2930-4000	1,2,4	H	Reg Himal	AP	Powdered seeds given to expel the worms from the stomach
<i>Rosularia rosulata</i> (Edgew.) H. Ohba	-	2000-3000	1,4	H	Reg Himal	Lf	Crushed leaves applied to skin ailments for fast healing
<i>Sedum ewersii</i> Ledeb.	-	2500-3200	2,3,4	H	Reg Himal Sibir Altaic	Lf, St	Decoction of leaf along with milk is given during severe stomach ache.
<b>Cucurbitaceae</b>							
<i>Cayaponia laciniosa</i> (L.) C.Jeffrey	Shivlingi	900-1400	2,6,12	H	Ind Or	Rt,Sd	Seeds are taken with milk for female fertility
<i>Solena amplexicaulis</i> (Lam.) Gandhi		800-2000	1,2,4	H	As Trop et Sub Trop	Fr	Paste is allpied on burns and snake bite
<i>Trichosanthes tricuspidata</i> Lour.		800-2300	1,2	H	Cochinch	Lf, Rt, Sd, Fr	The oil extracted from the roots is used as a pain killer. the plant is used for curing snakebite poisoning and the juice of the plant is applied externally
<b>Cuscutaceae</b>							
<i>Cuscuta reflexa</i> Roxb.	Akash-Bel	1000-1400	2,3,4,5,6	H	Ind. Or	St	The juice of the plant, mixed with the juice of Saccharum officinarum, is used in the treatment of jaundice and bilous disorders
<b>Dioscoreaceae</b>							
<i>Dioscorea. bulbifera</i> L.	Tardi	800-2000	1,2,4	H	As Trop	Tu	Root tuber juice taken in the treatment of roundworms also

							used to alleviate constipation
<i>D. deltoidea</i> Wall. ex Kunth		1600-2800	1,2,3,4,7	H	Ind Or	Tu	Tuber paste applied externally for Rheumatism.
<b>Dipsacaceae</b>							
<i>Dipsacus inermis</i> Wall		2200-3250	1,2,4	H	Reg Himal	Lf	Infusion of leaves is used to treat acne
<i>Morina longifolia</i> Wall. ex DC.**		2900-3050	1,7	H	Reg Himal	Rt	Leaf paste is applied on the skin.
<b>Ehretiaceae</b>							
<i>Ehretia acuminata</i> R.Br.	Bakli/ Bakaar/ Banchaula	800-2000	2,4	T	As et Austr Trop	Bk, Fr, Wd	Decoction applied externally on bleeding to promote healing
<b>Elaeagnaceae</b>							
<i>Elaeagnus conferta</i> Roxb.**	Geai	800-1800	1,2,4,7	Sh	Ind Or	Fl, Fr	The fruits and flowers are used to treat sores and ulcers
<b>Ericaceae</b>							
<i>Gaultheria trichophylla</i> Royle	-	2000-3500	1,3,4,5	H	Reg Himal	Lf, Fr	Infusion of leaf taken in Cough and cold
<i>Lyonia ovalifolia</i> (Wall.) Drude	Airean, Eهران	800-2000	1,2,3,5	T	Reg Himal Japan	WP	Crushed plants applied in treatment of skin inflammation
<i>Rhododendron arboreum</i> Sm.	Brash	1400-2200	1,2,3,5,7	T	Reg Himal	Fl, Lf	Crushed flowers are snuffed to stop nasal bleeding.
<b>Euphorbiaceae</b>							
<i>Baliospermum solanifolium</i> (Burm.) Suresh	Danti	1100-1500	1,3	Sh	Ind Or Malaya	Lf,Sd,Rt	Infusion taken in anthelmintic, alexiteric, diuretic, asthma and bronchitis
<i>Euphorbia pilosa</i> L.		2000-3050	1,4,8	H	Europe As Bor	WP	used for breathing disorders including asthma, bronchitis, and chest congestion. It is also used for mucus in the nose and throat, throat spasms
<i>E.stracheyi</i> Boiss.	-	2600-3000	1,5,6,7	H	Reg Himal	AP, Latex	Powder plant given in the treatment of cold, cough, fever and headache
<i>Falconeria insignis</i> Royle	Dudhla	800-1900	2,3	T	Ind Or	La	Used as Germicidal
<i>Jatropha curcas</i> L.	Safed arand	800-1500	2,9,12	Sh	Afr. Trop	Lf, Sd	latex are to cure toothache, as a mouth rinse to treat bleeding gums, as a haemostatic J. curcas roots are used for treating eczema, scabies, ringworm and gonorrhoea where these diseases are caused by fungi and bacterial infections
<i>Mallotus philippensis</i> Mull.	Kambal	800-1500	1,2,4	T	As et Austr Trop	Sd, Fr	A decoction of the leaves is used in the treatment of diarrhoea
<i>Phyllanthus emblica</i> L.	Aambla	970-1400	2,9,11	T	As. Trop	Fr	A decoction of the fruit is considered stimulant and is drunk to improve endurance during hard physical work or as an aphrodisiac. It is also taken to treat impotence and tiredness after prolonged diarrhoea)
<i>Ricinus communis</i> L.	Arand	800-1600	2,4,7	Sh	Reg Trop	Sd, Rt, Lf, Fr	Leaves and seed oil are applied topically for joint pains. Oil is also helpful during pregnancy.
<b>Fabaceae</b>							
<i>Astragalus himalayanus</i> Klotz.	-	3000-4000	2,4,5	H	Reg Himal	Lf, AP,Sd	Seeds soaked in the water given to the patients suffering from leprosy
<i>Butea monosperma</i> (Lam.) Taub.	Dhak	1200-1600	6	T	Ind Or Burma	Sd,Fl,Bk,Lf	A juice, which naturally exudes from cracks and wounds in the bark, hardens into a most beautiful, ruby-coloured, brittle, astringent gum
<i>Codariocalyx motorius</i> (Hout.) H. Ohashi Merrill.		800-1600	2,4,8	H	As Trop	Rt, Lf, Fr	Paste is applied in Rheumatism and wounds
<i>Crotalaria albida</i> Heyne ex Roth.		800-1800	1,2,4	H	Ind Or	Rt	Used as Purgative
<i>Dalbergia sissoo</i> DC.	Tahli	1100-1600	6,9	T	Ind Or Afghanistan	Lf,Bk,Wd,Rt	Decoction of leaves prepared and taken against vomiting
<i>Desmodium elegans</i> DC.	Chagla, Kathi	800-	1,2,3,5,7,9	Sh	Reg Himal	AP, Rt, Wd	Bark juice used in the treatment

		2500			China		of ulcers
<i>D. gangeticum</i> (L.) DC.	Chagla	800-2200	2,4,8	Sh	As Trop Austr	WP	Antidote to snake venom, asthma, bronchitis, cough, dysentery, eye infection, fever, tonic, vomiting
<i>D. microphyllum</i> (Thunb.) DC.		800-2000	1,2,4	H	As Trop Austr	Rt	Powdered rootswith milk given to the patients suffering from urinary ailments
<i>Flemingia semialata</i> Roxb.		800-1700	1,2,3,4	Sh	As Trop	Rt, Lf	Leaf decoction given in the treatment of tuberculosis
<i>F. strobilifera</i> R.Br.		800-2000	1,2	H	Ind Or Malaya	Rt, Lf	Juice valued in treating rheumatic problems
<i>Indigofera heterantha</i> Wall. ex Brand.	Kali Kathi	1600-2800	1,2,3,4,5,7	Sh	Reg Himal	Lf, Wd	Leaves are boiled and given against dysentery and diarrhea
<i>Lathyrus aphaca</i> L.		800-1200	2,4	H	As Trop	Sd	Infusion used in the treatment of leucorrhoea
<i>Parochetus communis</i> Buch.-Ham. ex D.Don		1800-2800	1,5	H	Ind Or Malaya Afr Trop	Fl	Used to relieve stomache/intestinal pain due to worm
<i>Tadehagi triquetrum</i> (L.) H. Ohashi		1600-2500	2,4	H	As Trop	WP	Powdered plant given in the treatment of fever and headache
<i>Tephrosia purpurea</i> (L.) Pers.		1100-1600	1,4,6	H	As et Afr Trop	WP	Paste applied on the infected lesions of the skin
<i>Trifolium repens</i> L.		800-2500	1,6,8	H	Geront BorTemp	WP	The whole plant is boiled and taken in the case of menopause and is a health drink recommended for women.
<i>Vigna vexillata</i> (L.) A.Rich.		2000-2800	1,2,4	H	Geront Trop	Rt, Sd	Infusion used in dysentery and other stomache disorder
<b>Fumariaceae</b>							
<i>Fumaria indica</i> Pugsley		800-1800	1,2,4	H	Europe Afr Bor	WP	Paste applied on the infected lesions of the skin
<i>Corydalis cornuta</i> Royle	-	2400-3500	2,4	H	Reg Himal	Rt	powdered roots given with water or milk to cure malarial fever
<b>Gentianaceae</b>							
<i>Gentiana decemfida</i> Buch.-Ham. ex D.Don		1800-2500	1,8	H	Reg Argent	WP	Powdered plant given in the treatment of fever and headache
<i>G. carinata</i> Griseb. **		2800-3250	2,8	H	Reg Himal	WP	Powdered plant given in the treatment of cold, cough, fever and headache
<i>Swertia angustifolia</i> Buch.- Ham. ex D.Don		1600-2400	1,4	H	Reg Himal	WP	Infusion taken internally in the treatment of liver malaria and fever
<i>S. cordata</i> (Wall. ex G. Don) C.B. Cl**	Charaite	2700-3500	1,2	H	Reg Himal	WP	Pellets given with luke water for curing the stomache trouble
<i>S. ciliata</i> (G.Don) Burt	-	2700-4000	1,3,4	H	Reg Himal	Lf	Decocted leaves given to reduce fever
<i>S. paniculata</i> Wall. **	Charaite	2000-2600	1,2,3,4,8	H	Reg Himal	WP	Infusion taken internally in the treatment of fever
<b>Geraniaceae</b>							
<i>Geranium nepalense</i> Sw.	Jibru ghass	1500-3100	1,2,3,4,5,6,9	H	Ind Or China	Rt	Juice taken in treating rheumatic problem
<i>G. pratense</i> L.		2200-3050	1	H	Europe As Bor	WP	Powdered roots given to reduce fever
<b>Hypericaceae</b>							
<i>Hypericum japonicum</i> Thunb. ex Murr.		1600-2600	3,4	H	As Temp Or Austr As	WP	Paste applied on wounds for quick healing
<i>H. oblongifolium</i> Choisy**	Kharau	800-2200	1,5,7	Sh	Reg Himal	Lf, Fl	An infusion of the flowers in olive oil is applied externally to wounds, sores ulcers swellings and rheumatism
<i>H. perforatum</i> L.		1900-2400	1,2	H	Europe As Bor	Rt	Paste applied on wounds for quick healing
<i>H. uralum</i> Buch.-Ham.	Bani Wakra	1800-2500	1,5	Sh	Reg Himal China Japan	Sd, Lf	An infusion of the flowers in olive oil is applied externally to wounds, sores ulcers swellings and rheumatism
<b>Hypoxidaceae</b>							
<i>Curculigo orchoides</i> Gaertn.		800-2000	1,2,4	H	As Trop	Rh	Paste applied on wounds for quick healing
<i>Hypoxis aurea</i> Lour.		1600-	1,2,4,8	H	Cochinch	WP	Infusion used to relieve swelling

		2000					
<b>Lamiaceae</b>							
<i>Ajuga brachystemon</i> Maxim.**	Neel kanthi	800-2500	1,2,4,5,7,8	H	Reg Himal	WP	Leaf powder is applied to cure mouth ulcers. Decoction of leaves helps to cure internal sores. The juice from the leaves is helpful for diabetic person. Juice applied on scalp for killing lice.
<i>Ajuga integrifolia</i> Buch.-Ham.**	Neel kanthi	800-2600	1,2,4,5,7,8	H	Afr Trop Ind Or As Or	Lf	Leaf decoction used in the treatment of fever and acts blood purifier
<i>Anisomeles indica</i> (L.) Kuntze	-	980-1500	1,3,5	H	Ind Or	Lf	Infusion given in the treatment of urinary problems
<i>Clinopodium umbrosum</i> Koch.	-	800-2700	1,2,4	H	Oriens Ind Or	WP	Juice applied to cuts as blood purifier
<i>Elsholtzia flava</i> (Benth.) Benth.	Pothi, Jaunkra	1600-2000	1,2,4	H	Reg Himal	Lf	Infusion of leaves for stomach upsets and painful menstruation
<i>E. fruticosa</i> (Don) Rehd.	Pothi, Jaunkra	1600-2200	1,2,4	Sh	Reg Himal	Lf, Fr, Sd	Infusion taken to relieve sciatica
<i>E. strobilifera</i> Benth.		1600-2700	1,2	H	Reg Himal	Lf, Inf	Paste is applied on internal burns
<i>Isodon coetsa</i> (Buch - Ham. ex D.Don) Kudo	Chichri	2000-2500	1,2,3,4,5	H	Reg Himal Burma	Lf	Leaves are used in gastric complaints
<i>I. rugosus</i> (Wall. ex Benth.) Codd		1500-2600	2,4	Sh	Reg Himal	Lf	Decoction of leaves are taken internally as a tea in the treatment of fever. Juice applied to cuts and wounds
<i>I. lophanthoides</i> var. <i>graciliflorus</i> (Benth.) H. Hara		2000-2600	1,4	H	Reg Himal	Lf	Infusion used in dysentery and other stomach disorders
<i>Mentha longifolia</i> (L.) Huds.	Podina	800-3050	4,6	H	Europe As Bor	Lf, WP	Decoction of leaves is taken twice a day against diarrhoea. Crushed leaves are used to cure joint pain. Paste of leaves is used for snakebite.
<i>M. piperita</i> L.		800-1800	1	H	Europe As et Afr Bor	Lf	Infusion taken in indigestion, malarial fever
<i>Micromeria biflora</i> Buch.-Ham.		800-2100	1,2,4,5	H	Ind Or Arab Afr Trop	Lf	Leaf paste is applied on wounds. Leaves are chewed against diabetes.
<i>Nepta royleana</i> Stew.		2000-2800	1,8	H	Reg Himal	WP	Infusion used in dysentery and other stomach disorders
<i>Origanum vulgare</i> L.	Bantulsi	1600-3000	1,2,3,4,5,7,8	H	Europe As	WP	Infusion of leaves and flowering stem taken internally to treat cold, mild feverish illness, indigestion,
<i>Phlomis bracteosa</i> (Royle ex Benth.) Kamelin & Makhm.**		2000-3300	1,3,6,7	H	Reg Himal	Fl	Infusion acts as eye drops to cure inflammation of the eyes
<i>P. mollis</i> Spr.		800-1500	1,4	H	Ind Or	Sd	Used in Rheumatism
<i>Pogostemon benghalense</i> (Burm.f.) Kuntz**		1800-2300	1,2,4	Sh	Ind Or	Lf	Poultice used as dressing for wounds
<i>Prunella vulgaris</i> L.	Patindu	2000-2800	1,2,4,8	H	Reg Temp	WP	The whole plant is boiled and filtered and taken against cerebral problems and also during heavy breathing.
<i>Roylea cinerea</i> Baill.	Karnait	800-1700	1,4	Sh	Reg Himal	Lf, Rt	Powdered plant taken with water to cure sore mouth
<i>Salvia mukerjeei</i> Bennet & Raizada**	Guadra	800-2200	1,2,3,4,6	H	Reg Himal	Rt, Lf, Fl	Dried roots are powdered and taken with water during cough.
<i>S. moorcroftiana</i> Wall. ex Benth.**		2000-3200	2,4,8	H	Reg Himal	Rt	Infusion used as gargle in the treatment of sore throats
<i>S. nubicola</i> Wall.**		1400-2200	2	H	Europe Austr Oriens Reg Himal	Lf, Rt	Decoction given in the treatment of cold and cough
<i>Scutellaria scandens</i> Buch.-Ham. ex D.Don**		800-2100	1,4	H	Reg Himal	Lf, Fl	Juice of leaves and flowers used in treatment of diarrhea and dysentery
<i>Thymus linearis</i> Benth.	Ban jira	2000-3050	1,2,4,8	H	Europe As et Afr Bor	WP	Powdered plant taken with water to cure stomach disorders
<b>Lauraceae</b>							

<i>Cinnamomum tamala</i> Nees & Ebern**		800-1600	1,5	T	Reg Himal	Bk, Lf	The dried bark is used to treat stomach-ach
<i>Neolitsea pallens</i> (D.Don) Momi. & Hara ex Hara	Pangain, Paror	1800-2800	1,2,4,5,7	T	Reg Himal	Fr, Lf	Freshly pressed juice of the whole plant is considered effective hair tonic
<b>Liliaceae</b>							
<i>Polygonatum cirrhifolium</i> (Wall.) Royle	Salam-Mishri	2500-3250	1	H	Reg Himal As Bor	Tu	Dried rhizome powered is taken with milk to cure Leucorrhoea and menorrhagia and problems in the kidney.
<i>P. verticillatum</i> (L.) Al.	Salam-Mishri	2000-3300	1,2,3,4	H	Europe As Bor	Tu	Tuber increase appetite
<b>Linaceae</b>							
<i>Reinwardtia indica</i> Dumort.**	Piyan	800-1800	1,2,5	H	Ind Or	AP	Decoction is used to cure Mouth sores
<i>Viscum album</i> L.	Rhini	800-2000	10	Sh	Europe As Temp	WP	Paste applied on the boils wounds and burns
<b>Lythraceae</b>							
<i>Ammannia baccifera</i> L.	Dadarbutti	800-1300	12	H	Geront.	WP	Paste applied on the skin considered as rejuvenator
<i>Woodfordia fruticosa</i> (L.) Kurz.	Dhwe	1400-1700	1,2,4	Sh	As et Afr Trop	St, Fl, Rt	Flowers powder used against dysentery and is helpful to control uterine bleeding. Stem paste used for healing wounds.
<b>Malvaceae</b>							
<i>Abelmoschus manihot</i> (L.) Medikus	-	1100-1500	2,6	H	Geront. trop	Bk, Fl, Lf	Paste is considered effective against intestinal problems
<i>Abutilon indicum</i> (L.) Sweet	Atibala	800-1100	12	H	As Trop	Fr, Sd, Bk,Lf,Rt	Decoction is given in headaches, gonorrhea, bladder infection, pile complaints
<i>Althaea officinalis</i> L.	Khatmi	900-1300	5	H	Europ Oriens	WP	Paste is applied in Sprains,aching muscles, insect bites, skin inflammations, splinters
<i>Hibiscus syriacus</i> L.	Gudhal	800-1200	6	Sh	Geront	Rt,Bk	Infusion taken in skin diseases, dizziness and stomachic
<i>Malva verticillata</i> L.		800-2000	1,2,6,8	H	Europe As et Afr Bor	WP	Juice mixed with little salt is taken orally in the treatment of fever
<i>Sida cordata</i> (Burm.f.) Borss Wk.		2000-2300	1,2,4	H	Ind Or	WP	Powdered leaves mixed with black pepper to cure gastric problem
<i>S.cordifolia</i> L.		1700-2200	1,3,4	H	Reg Trop	WP	Paste applied on sores for fast healing
<i>Urena lobata</i> L.		800-1600	1,2,4	Sh	Reg Trop	Rt, St	Decocted stem and roots considered as digestive and stomachic
<b>Martyniaceae</b>							
<i>Martynia annua</i> L.	Bichoo ghas	900-1200	2,4	H	Amer Bor	WP	Entireplant expressedin to juice and applied on back to treat backache
<b>Mimosaceae</b>							
<i>Acacia catechu</i> (L.f.) Willd.	Khair	1100-1700	2,13	T	Ind Or	Bark	decoction of bark mixed with milk used to cure cough; Apply Katha lemon slice and taken regularly empty stomach for cure piles
<i>A. nilotica</i> (L.) Delile	Kikker	100-1500	13	T	Afr As Trop	Bark, leaves	decoction of the leaves and bark in water twice a day to get relief from bleeding uterus
<i>Albizzia lebbek</i> Benth.	Siris	800-1500	1,2	T	Geront Trop	Fl, Sd, Bk, Rt, Lf	Decoction of roots or root powder is taken against tumors. Stems are recommended against stress and depression.
<b>Melastomataceae</b>							
<i>Osbeckia stellata</i> Buch.-Ham. Ex Don**	Kubsh	1400-2000	1,2,8	Sh	Reg Himal	Rt, Lf	Powdered roots used internally in the treatment of urinary disorders
<b>Meliaceae</b>							
<i>Melia azedarach</i> L.	Darek	800-1700	1,2	T	Reg Himal	Lf,Fr,Sd	The dried seed powder is taken with warm water against Piles



<i>Toona ciliata</i> M.Roem.	Tooni, Tun	800-1600	1,5	T	Malaya Austr	Bk, Fr, Lf	Decoction of plant is given to treat dysentery and gastric problems.
<i>T. serrata</i> (Royle) Roem.	Darlein	1400-2200	1,5	T	Malaya Austr	St	Cold infusion of the leaves used to improve appetite
<b>Menispermaceae</b>							
<i>Cocculus hirsutus</i> (L.) W.Theob	Chireta	1000-1500	2,6	H	Burma	Lf& Rt	Decoction used in the treatment of fever
<i>Cissampelos pariera</i> L.		800-2000	1,2	H	Reg Trop	WP	Powdered roots used internally in the treatment of urinary disorders
<i>Stephania glabra</i> (Roxb.) Miers.	Bis-khapar	800-1600	1	H	As Trop	Tu	Extract of the root is taken for the relief of stomach pain
<i>Tinospora sinensis</i> (Lour.) Merr.	Gilloy	1000-1600	10	H	Ind Or Malaya	WP	The stem is soaked in warm water and applied externally to reduce swelling and pain in joints.
<b>Moraceae</b>							
<i>Ficus palmata</i> Forsk.	Fegra	800-1800	1,2	T	Afr Trop Arab Ind Or	Fr, Lf	Fruits used to relieve constipation
<i>F. pumila</i> L.		800-2000	1,2	T	Afr Trop Arab Ind Or	Fr, La	Decoction of leaves and flowers considered as digestive and stomachic
<i>F. racemosa</i> L.	Umreya	1000-1500	1,2	T	Ind Or Burma	Fr, La	Fruits used to relieve constipation
<i>F. religiosa</i> L.	Pipal	800-1500	1,2	T	Ind Or	Lf, Fr, Bk	Decoction used to lower fever
<b>Myricaceae</b>							
<i>Myrica esculenta</i> Buch.-Ham. ex Don	Kaphal	1400-2400	1,2,3,4	T	As Trop et Sub Trop	Bk, Fr,Wd	Powder of fruit is given to cure relieve indigestion
<b>Myrsinaceae</b>							
<i>Myrsine africana</i> L.	Kanaru	1600-2500	1,2,3	Sh	Reg Himal Afr Austr et Trop Ins Azor	AP	Paste applied on the boils, wounds, burns
<b>Myrtaceae</b>							
<i>Syzygium cumini</i> (L.) Skeels	Jamun	1200-1600	2,6	T	Temp Trop Asia	Bk,Fr,Lf	Powder is given to diabetic patients
<b>Oleaceae</b>							
<i>Jasminum dispersum</i> Wall.	Banmalti	1500-2000	1,4,7	Sh	Reg Himal	Lf	Decoction given in menstrual disorders
<i>J. humile</i> L.	Banmalti	1600-3100	1,7	Sh	Reg Himal	Fl, Lf, Rt	Flowers infusion taken orally to reduce the fever
<i>J. officinale</i> L.	Banmalti	1800-2900	1,2,3	Sh	Ind Bor Occ China	Fl, Lf, Rt	Powdered leaves mixed with black pepper to cure gastric problem
<i>Olea ferruginea</i> Royle	Kahu,Jaitoon	1300-1600	2,12	T	Reg Himal	LF, Fr	Juice taken orally in the treatment of urinary problems
<b>Onagraceae</b>							
<i>Circaea alpina</i> L.		2200-3100	1,2,3	H	Europe As Bor Am Bor	WP	Paste applied on sores for fast healing
<i>Epilobium angustifolium</i> L.		1800-3200	1,3	H	Europe As Bor Am Bor	WP	Crushed leaves applied to cuts and wounds
<b>Orchidaceae</b>							
<i>Calanthe plantaginea</i> Lindl.**		1800-2600	1	H	Reg Himal	Lf,Bb	Paste applied on sores for fast healing
<i>Crepidium acuminatum</i> (D.Don) Szlach.		1600-2200	1,2,7	H	Reg Himal	Lf, Rt	Leaf juice mixed with honey given to cure bronchitis
<i>Dactylorhiza hatagirea</i> (D.Don) Soo**		2900-3500	4,8	H	Reg Himal	Tu	Paste used to bone fracture
<i>Epipactis heleborine</i> (L.) Crantz		1600-2200	1,2,3	H	Reg Himal	Lf, Rh	Leaf juice mixed with little salt used to treat fever
<i>Goodyera repens</i> (L.) R. Br.		2400-2800	1,2	H	Reg Himal	AP	Cold infusion of the leaves used to improve appetite; infusion held in mouth as a treatment for toothache
<i>Habernaria intermedia</i> Don**	Sirab	1600-2000	1,2,7	H	Reg Himal	Tu	Paste applied on the skin considered as rejuvenator
<i>H. marginata</i> Hk.f. ex Collett		800-1500	1,2	H	Ind Or	Tu	Juice taken orally in the treatment of urinary problems
<i>H. pectinata</i> (Sm.) D.Don**		1500-	1,2	H	Reg Himal	Lf,Tu	Paste applied on Snake bites and

		2000					arthritis
<i>Herminium lanceum</i> Thunb. ex Swartz.		1800-3300	1,2,7	H	Java	Bb	Juice taken orally in the treatment of Urinary diseases
<i>Malaxis muscifera</i> (Lindl.) Kuntze		2800-3200	1,5	H	Reg Himal	Bb	Infusion used externally to treat skin diseases
<i>Platanthera edgeworthii</i> (Hk.f. ex Collett)**		2000-2800	1,2,3,7	H	Ind Or	Tu	Decoction used as Blood purifier tonic
<i>Satyrium nepalense</i> D.Don		1600-2500	4,8	H	Ind Or	Tu	Infusion given in the treatment of dysentery
<i>Spiranthes sinensis</i> (Pers.) Ames.	-	1100-2800	4,8	H	China	Tu	Extract of leaves and flowers used to cure diarrhea and arresting haemorrhages
<b>Oxalidaceae</b>							
<i>Oxalis corniculata</i> L.	Malori	800-2200	1,2,5	H	Amphig Temp et Trop	WP	Fresh juice is mixed with a pinch of Kali Mirch used orally for piles. Leaf paste used for gum problems.
<i>O. latifolia</i> Hk.f.		1500-2500	1,4,7,8	H	Mexico	WP	Juice mixed with butter is applied to muscular swellings, boils and pimples
<b>Papaveraceae</b>							
<i>Argemone mexicana</i> L.		800-1500	1,2,4	H	Am Bor Mexico	Sd,Rt	Root paste is anti-inflammatory on external application; also applied on scorpion and insect bites
<b>Parnassiaceae</b>							
<i>Parnassia nubicola</i> Wall. ex Royle**		2700-3400	1,8	H	Reg Himal	Tu	Paste of tuber is applied on snake bite
<b>Pedaliaceae</b>							
<i>Sesamum indicum</i> L.		900-1800	11	H	As Trop	Rt,Lf,Sd	The seed is diuretic, emollient, galactagogue, lenitive and tonic, and acts as a tonic for the liver and kidneys. It is taken internally in the treatment of premature hair loss and greying, convalescence, chronic dry constipation, dental caries, osteoporosis, stiff joints, dry cough etc.
<b>Pittosporaceae</b>							
<i>Pittosporum eriocarpum</i> Royle**	Thira	900-1300	6,13	T	Reg Himal	Br, Rt	The bark is aromatic, when freshly cut, and is said to possess narcotic properties. It was used locally in chronic bronchitis and as an antidote to snake poison. The plant yields an essential oil, which was used as a tonic, stimulant, and was considered specific for certain skin diseases.
<b>Phytolaccaceae</b>							
<i>Phytolacca acinosa</i> Roxb.	Zharka	2000-2500	3,7	H	Reg Himal China	Lf	Powdered roots used internally in the treatment of urinary disorders
<b>Plantaginaceae</b>							
<i>Plantago himalaica</i> Pilg. **	Isabgol	2900-3100	1,4,6	H	Reg Himal	Sd	Paste of crushed leaves is applied to boils.
<i>P. lanceolata</i> L.	Isabgol	2000-2800	1,4,5,6	H	Reg Himal	Lf	Seeds given in the treatment of constipation
<i>Wulfeniopsis amherstiana</i> (Benth.) D.Y. Hong	-	1500-2700	2,4	H	Reg Himal	Rt	To treat stomach disorders, inflammations or wound healing
<b>Poaceae</b>							
<i>Apluda mutica</i> L.	Mushkneti	1400-2500	1,2,3,4,5,7	H	As Trop Pdynes Austr	WP	Used in the treatment of constipation
<i>Arundinella nepalensis</i> Trin.	Garein	800-2000	1,4,7	H	Ind Or	WP	Used as Ointment
<i>Cymbopogon martini</i> (Roxb.) Wats.	Dantu ghash	800-1600	1,8	H	Reg Trop	Lf	Inflorescence of the plant is expressed in to juice used in the treatment of cold and cough
<i>Cynodon dactylon</i> (D) Pers.	Doob	800-	1,2,5	H	Cosmop	WP	The leaf extract is inserted

		2500					through nostrils.
<i>Desmostachya bipinnata</i> (L.)Stapf.	Kusha	1200-1700	1,2,5	H	Madag	WP	Highly valued locally as remedy for treating tumours, kidney and bladder ailments
<i>Eleusine indica</i> Gaertn.		800-1800	1,4,7	H	Cosmop Trop et Sub Trop	WP	Infusion taken to reduce fever
<i>Heteropogon contortus</i> L.	Kumbri	800-1700	4,7,8	H	Ind Or	WP	Poultice applied on the cuts and briises for quick healing
<i>Imperata cylindrica</i> (L.) Raeusch.		800-1900	4,5,8	H	Reg Calid	AP, Rt	Medicinal (Antidote, fever, intestinal parasites, liver complaints, piles, tonic)
<i>Saccharum spontaneum</i> L.	Surah	800-2000	1,2,3,4	H	Geront Trop	Lf	Extract of leaves used to cure diarrhoea
<b>Podopyllaceae</b>							
<i>Sinopodophyllum hexandrum</i> (Royle) T.S.Ying	Ban Kakri	2900-3700	1,3,5,7	H	Reg Himal	Fr, Rt, Sd	Decoction of root is taken to cure asthma. The paste is applied to joints.
<b>Polygonaceae</b>							
<i>Fagopyrum acutatum</i> (Lehm.) Mansf. ex K.Hammer		1600-2800	1,4	H	Reg Himal China	Lf	Leaves cooked are helpful in constipation
<i>F. esculentum</i> Moench		800-2000	1,4	H	Europe As Bor	Rt, Fr, Lf	Infusion of leaves and flowering shoot is used internally in the treatment of high blood pressure
<i>Persicaria amplexicaulis</i> (D.Don) Ronse Decr.		1500-2600	1,2,3,4,6,7	H	Reg Himal	Lf, Rt	Paste applied on insect sting
<i>P. capitata</i> (Buch.-Ham. ex D. Don) Gross		800-2000	1,2,3,4,5,6	H	Reg Himal	WP	Paste applied on insect sting
<i>P. nepalense</i> Meisn.	Nalora	1600-2000	1,2,3	H	As et Afr Trop et Sub Trop	Lf	Paste applied on skin to reduce swelling
<i>P. plebium</i> R.Br.		800-2200	3,5,7	H	Geront Trop et Temp	WP	Decoction is taken in Cough, gastric problems
<i>P. recumbens</i> Royle ex Bab. **		1800-2500	1,2,6	H	Reg Himal	WP	Dewcoction used as blood purifier
<i>Polygonum molle</i> D. Don	-	1600-2600	1,2,3	H	Reg Himal	Lf,Sd	Crushed leaves used in the treatment of boils
<i>Rumex nepalensis</i> Spr.	Malora	1800-3300	1,2,4,5,6	H	As Occ Ind Or Malaya Afr Austr	Lf, Rt	Decoction applied to dislocated the bones; Paste applied to swollen gums
<b>Primulaceae</b>							
<i>Lysimachia lobelioides</i> Wall.		1600-2200	1,2	H	Reg Himal Java	Lf	Paste of leaves applied on snake bite
<i>Primula spicata</i> Franch	Kauri	1800-3050	1,2,3,6,7	H	Reg Himal	Fl, Lf	Decoction of the stem helps to relieve menstruation pain. Stem and leaf mixture are taken against liver disorders.
<b>Punicaceae</b>							
<i>Punica granatum</i> L.	Daru	800-1800	1,2,7	T	Europe Austr Mauri	Fr	Chutney of fruit is taken in case of vomiting
<b>Ranunculaceae</b>							
<i>Actaea spicata</i> Wall. ex Royle		2200-3600	1,7	H	Reg Bor Temp	Rt	Powder of root is taken with gur and ghee for correcting menstrual flow
<i>Anemone obtusiloba</i> D. Don **		2500-3850	1,2,6	H	Reg Himal	Rt, Sd	Dried bulb in powdered form is applied to cuts, burns.
<i>A. rivularis</i> Buch.-Ham. ex DC.	Carbini mamiri	2200-3700	1,2,4,6	H	Ind Or	WP	Plant juice is given to stop vomiting
<i>A. vitifolia</i> Buch.-Ham. ex DC.		1800-3200	1,4,6,8	H	Reg Himal	Rt, Lf	Powdered leaves are rubbed into the scalp to treat lice
<i>Aquilegia pubiflora</i> Wall. ex Royle **		2500-3400	1,2,3	H	Reg Himal Ind Or	AP	Paste is applied in condition of Ring worm, eczema
<i>Clematis barbellata</i> Edgew. **		2800-3100	1,2,3,4,5	Sh	Reg Himal	Lf, Rt	Leaf juice used to relieve stomache, especially those caused by indigestion
<i>C. dubia</i> (Endl.) P.S.Green		1400-2000	1,2,5	Sh	Reg Himal	Lf, Rt	Paste of the stem or root bark is pressed against the teeth to relieve toothache
<i>C. montana</i> Buch.-Ham. ex DC.		1800-2600	1,2	Sh	Reg Himal	Rt	Juice applied externally to cuts and wounds

<i>Delphinium denudatum</i> Wall. ex Hk. f. & Th.**		2700-3200	1,4,6	H	Reg Himal	Rt	Powder of roots is applied in teeth to relieve toothache
<i>D. vestitum</i> Wall. ex Royle**	Kelulu	2800-3400	1,4,6	H	Reg Himal	WP	Extract of whole plant acts as antidote to snake bite
<i>Ranunculus abortivus</i> L.		1600-2800	1,2,4,5,6	H	Ind Or Malaya	WP	Decoction of leaves is taken as coolant and help to treat urinary tract infection.
<i>R. hirtellus</i> Royle ex D.Don		2500-3050	1,6	H	Reg Himal	AP	Plant paste used in the treatment of gout
<i>Thalictrum foliolosum</i> DC.**	Mamiri	1500-2600	1,2,3,5	H	Reg Himal	Rt	Root infusion considered a good remedy in treating indigestion
<i>T. secundum</i> Edgew.**	Katmeena	2600-3050	1,3,6	H	Reg Himal	Rt	Paste of roots with mustard oil used on swelling
<b>Rhamnaceae</b>							
<i>Rhamnuspurpurea</i> Edgew.**		1400-2000	1,2	Sh	Reg Himal	Fr,Wd, Lf	Infusion is taken to reduce fever
<i>R. triquetra</i> (Wall.) Brandis **		800-2200	1,2	Sh	Reg Himal	Bk	Juice of bark is considered good in Dysentery
<i>R. virgatus</i> Roxb.	Chathau	1400-2200	1,2,4	Sh	Ind Or Bor	Fr, Lf, Wd	Paste is applied in case of Emetic, infection of spleen
<b>Rosaceae</b>							
<i>Agrimonia pilosa</i> Ledeb.	Kanaula	1600-2800	1,2,3,4,5,6,9	H	Reg Bor Temp	AP, Rt	Crushed leaves applied to the wounds to check bleeding; root used in the treatment of coughs, cold and diarrhoea
<i>Cotoneaster bacillaris</i> Wall. ex Lindl.**	Rhiunsh	1600-2200	1,2	Sh	Reg Himal	Fr, St	The stolons are crushed and applied to cuts and wounds to arrest bleeding.
<i>C. microphyllus</i> Wall. ex Lindl.	Chinchri	2000-3500	1,2,4	Sh	Reg Himal	Rt, Lf	Juice used in the treatment of ulcers
<i>Duchesnea indica</i> Focke		1600-2500	1,2,3,4,5,9	H	Ind Or Malaya China	Lf,Fl, Fr, Rt	Decoction or the fresh leaves are crushed and applied externally as a poultice to reduce fever
<i>Geum elatum</i> Wall. ex G.Don**		2800-3200	1,2,4,5	H	Reg Himal	Rt	Juice used asear drops to cure earache
<i>Potentilla atrosanguinea</i> Lodd.**		2800-3400	1,2,3,4,6,8	H	Reg Himal	Lf	Juice used in treating indigestion
<i>P. fulgens</i> Wall. ex Hk.f.**	Dora	1800-3000	4,8	H	Reg Himal	Rt	The juice of the plant is used in the treatment of profuse menstruation
<i>Prinsepia utilis</i> Royle	Bekhal	1600-2600	1,2,4,5	Sh	Reg Himal	Sd, Fr	Root extract used to neutralize poison in the body.
<i>Prunus armeniaca</i> L	Shada, Khumani	1000-2200	1,5	T	Reg Caucas	Sd, Fr, Wd	Fruit extract is given for liver disorders; crushed branches soaked in water used in pregnancy. Decoction of bark is concentrated and applied to the joints.
<i>Rosa macrophylla</i> Lindl.**		2200-3200	1,2,3,4,7	Sh	Reg Himal China	Fl	Decoction of leaves is given during stomach infection.
<i>R. moschata</i> L.	Kuja/ Shami	800-1800	1,2,3,4,5,7	Sh	Reg Himal China	Lf, Fr, Wd	Decoction of flower and leaf is taken against diarrhea. The paste is applied on wounds.
<i>R. sericea</i> Lindl.		2000-3400	1,2	Sh	Reg Himal	Rt, Fr, Fl	Root paste eaten at morning helps to control excessive bleeding. The leaves are crushed and taken with warm milk to treat stomach worms.
<i>Rubus biflorus</i> Buch.-Ham. ex Sm.	Akhaey/ Heer	1500-2500	1,2	Sh	Reg Himal	Fr, Rt	Decoction considered as stomachic
<i>R. ellipticus</i> Don	Akha	1500-1800	1,2,3,4,5	Sh	Ind Or	Fr, Rt	The fruit is chewed to treat blemishes
<i>R. niveus</i> Thunb.	Akha	1800-2600	1,3	Sh	Reg Himal	Fr	Decoction is taken to relieve stomachache
<i>R. paniculatus</i> Sm.**	Kalanche, Kala akha	1500-2600	1,4	Sh	Reg Himal	Lf, Fr	Decoction is taken to relieve stomachache
<i>Sibbaldia cuneata</i> Hor. ex Kuntz		2800-3050	1,2	H	Reg Bor et Austr	Fr, Rt	Juice mixed with salt and taken orally to get relief from bodyache
<i>S. bella</i> Sims.		2700-	1,3	Sh	Reg Himal	Sd	Juice used in the treatment of

		3050					gastric trouble
<b>Rubiaceae</b>							
<i>Catunaregam spinosa</i> (Thunb.) Tirveng.	Madanphal	900-13000	6,13	H	Geront Trop	Fl & Bk	Decoction applied externally as a poultice to reduce fever
<i>Galium rotundifolium</i> L.		2200-3050	1,2,3,4,5,8	H	Europe As Temp	AP	Paste applied on insect sting
<i>Leptodermis lanceolata</i> Wall.**	Bilan	800-3050	1,2	Sh	Reg Himal	Bk, Lf	Extract of leaves used to cure diarrhoea
<i>Pavetta indica</i> L.	Papri	1000-1400	9,12	H	As et Aust Trop	Rt,Lf	Extract of leaves and flowers used to cure diarrhea and arresting haemorrhages
<i>Rubia cordifolia</i> L.**		800-2400	1,2	H	As Trop et Temp Afr Trop	Rt, St	The infusion of the roots is used internally in the treatment of stones in the kidney
<b>Rutaceae</b>							
<i>Aegle marmelos</i> (L.) Correa	Bil, Bil patri	1200-1600	2,13	T	Ind Or	Lf,Fr	Decoction of leaves and fruits are taken in stomach infection, dysentery
<i>Boenninghausenia albiflora</i> (Hk.) Reichb.	Pissumar	2000-2900	1,2,3,4,5,9	H	Reg Himal Japan	Rt	Decoction of roots is given against dysentery. The paste of root is applied on cuts, wounds.
<i>Glycosmis pentaphylla</i> (Retz.) DC	Gingging	1100-1500	13	Sh	Ind Or	St,Rt,Bk,Lf	Medicinal (fevers, liver complaints and intestinal worms, especially in children. Stems and roots of plant used on ulcers)
<i>Murraya koenigii</i> (L.) Spreng.	Kurry patta/Gandhela	900-1400	2,9,13	Sh	Ind Or	Lf, Fl & Bk	Warm decoction is applied topically on swelling of foot and legs.
<i>Skimmia laureola</i> (DC.) Zucc.**	Ner	2500-3550	1,2,4	Sh	Reg Himal	Lf	Decoction is used in toothache
<i>Zanthoxylum armatum</i> DC.	Tirmara, Trimbar	800-1800	2,4,7	Sh	Reg Himal China	Fr, Sd	Decoction used as gargle for throat irritation and fever. Stems and fruits are useful for dental problems. Paste made from fruit is useful for scabies.
<b>Sapindaceae</b>							
<i>Sapindus mukoros</i> Gaertn.	Reetha	1000-1600	6,9,13	T	As Trop	Fr & Bk	The paste of seeds used in scalp for healthy hair
<i>Dodonaea viscosa</i> (L.) Jacq.	Mehndu	900-1200	2	Sh	Malaya	Bk, Lf	Paste applied against snake bite
<b>Saururaceae</b>							
<i>Houttuynia cordata</i> Thunb.		1500-2000	1,5	H	As Temp	Lf, Rt	Decoction is used in the treatment of worms
<b>Saxifragaceae</b>							
<i>Astilbe rivularis</i> Buch.-Ham. ex Don		1800-2800	2,3,5	H	Reg Himal	Lf	Juice used as blood purifier; also in toothache
<i>Bergenia pacumbis</i> (Buch.-Ham. ex D. Don) C.Y. Wu & J.T. Pan	Pashan bhed	1500-2000	1,2,3,5	H	Reg Himal	Lf, Rh	Root juice used for dissolving stones in the kidney; externally applied as a poultice to boils
<i>Saxifraga parnassifolia</i> D. Don**		2800-3050	3,7	H	Reg Himal	Rt	Root juice used for dissolving stones in the kidney; externally applied as a poultice to boils
<b>Scrophulariaceae</b>							
<i>Antirrhinum majus</i> L.	Snapdragon	1000-1400	11,12	H	Reg. Mediterr	Lf, Fl	Juice used in the treatment of the gastric trouble
<i>Euphrasia himalaica</i> Wettst**		2800-4000	2,4	H	Reg Himal	Lf	Juice applied to forehead to relieve headache
<i>Lindenbergia indica</i> Vatke.		800-1800	4,5,7	H	Ind Or	Lf	Fruit used in the treatment of worms
<i>Pedicularis pectinata</i> Wall. ex Benth.**		2500-4000	2,7	H	Reg Himal	WP	Juice used to prepare constipation
<i>Scoparia dulcis</i> L.		1500-1800	4,7	H	Reg Trop	WP	Crushed leaves applied to cuts and wounds
<i>Verbascum thapsus</i> L.	Gaddi Tamaku	800-2800	1,2,4	H	Europe Afr Reg Himal	Sd	Smoke of flowers and leaves useful for asthma. Infusion of whole plant is used for snake bite. Paste of leaves is applied to boils. Crushed leaves given with warm water for constipation.

<b>Smilacaceae</b>							
<i>Smilax aspera</i> L.		1400-2000	1,2,7	Sh	Europe Oriens Ind Or	Rt, Lf, St	Leaf decoction given given to cure fever and stomache
<b>Solanaceae</b>							
<i>Datura innoxia</i> Mill.		800-1600	4,7	H	Geront Trop	Lf, Sd, Fr	The plant is used internally in the treatment of asthma and Parkinson's disease, excess causes giddiness, dry mouth, hallucinations and coma.; Externally, it is used as a poultice or wash in the treatment of fistulas, abscesses wounds and severe neuralgia.
<i>D. stramonium</i> L.	Datura	800-1700	4,7	H	Cosmo Trop et Temp	Lf, Sd, Fr	The leaves are fried or heated and used for formentation in case of arthritis,swellings etc.; The leaf juice, 1-2 drops is externally applied as ear drops for ear ache, and also be massaged over swellings
<i>Nicotiana tabacum</i> L.		800-1800	4,7	H	Am Austr	WP	Infusion of plant is taken in condition of Eczema, itching, toothache, wounds, veterinary antihelminthic
<i>Solanum americanum</i> Mill.		1400-2500	1,2,4,5	H	Amphig	Fr, Lf, Fl, Sd	Paste applied on boils, cough, skin diseases
<i>S.indicum</i> L.		800-1800	1,2,4	H	Reg Trop	Fr	Decoction taken in condition asthma, fever, colic
<i>S. virginianum</i> L Sch. & Wendl.		800-2000	1,2,4,5	H	Geront Trop	Fr, Rt	The paste of whole plant is applied on swollen and painful joints in arthritis. This gives relief in the swelling and pain.
<b>Symplocaceae</b>							
<i>Symplocos paniculata</i> (Thunb.) Miq.	Lodge	1500-2000	1,2	T	Reg Himal Burma China Japan	Bk, Lf	The bark is astringent, cooling and tonic. It is useful in the treatment of menorrhagia, bowel complaints, eye diseases and ulcers. It is also used as a gargle for giving firmness to spongy and bleeding gums. The juice of the bark is applied externally to sprains and muscular swellings.
<b>Thymelaeaceae</b>							
<i>Daphne papyracea</i> Wall. ex Stued.**	Kania/ Patrori	1800-2800	1,2,3,4,5,7	Sh	Reg Himal	Rt, Lf	Considered laxative and helps reducing fever
<b>Tiliaceae</b>							
<i>Grewia oppositifolia</i> Buch.-Ham. ex D.Don**	Bihul	800-1600	1,2,4	T	Reg Himal	Lf, St, Fr, Bk	Fresh leaves are boiled in water to prepare decoction which is further concentrated at low temperatures. The concentrated paste is applied to cure joint pains.
<b>Trillidiaceae</b>							
<i>Trillium govonianum</i> Wall. ex D.Don**		2800-3050	1	H	Reg Himal	Tu	the rhizomes are used to tboils, dysentery, and inflammation, menstrual and sexual disorders, as an antiseptic and in wound healing
<b>Ulmaceae</b>							
<i>Ulmus wallichiana</i> Planch.**	-	1600-2000	1,2	T	Ind Or	WP	Bark of this plant is crushed to make fine paste and boiled applied on skin infection
<b>Urticaceae</b>							
<i>Boehmeria platyphylla</i> D.Don	Siar	800-1800	1,2,3,5	Sh	As et Afr Trop Ins Pacif	Lf, St, Bk	Decoction of leaves used to cure Dysentery and eczema
<i>Parietaria debilis</i> Frost.		800-2000	1,2,4,5	H	Reg Trop et Sub Trop	Rt	Paste is applied on thescalp of hair for remove of Dandruff, hair problems
<i>P. umbrosa</i> Blume		1800-2600	1,7	H	Reg Himal	Lf	Paste applied on wounds



<i>Urtica dioica</i> Jacq. ex Wedd.	Kugsh/ Bicchu buti	800-2300	1,2,4,5	H	Reg Bor Temp	WP, Lf	Root juice used to treat constipation; fresh leaf juice applied externally in the treatment of headaches and swollen joints
<i>Urtica hyperborea</i> Jacq. ex Wedd.		800-2100	1,2,4	H	Reg Himal	WP	Infusion very helpful in the treatment of excessive menstruation; externally plant poultice is used to treat skin complaints
<b>Valerianaceae</b>							
<i>Valeriana hardwickii</i> Wall.	Nihani/ Nakh	2000-3050	1,2,7	H	Reg Himal Malaya	WP	Pounded leaves used as a poultice to treat boils.
<i>V. jatamansi</i> Jones	Nihani	800-3050	1,2,3,4,5,7	H	Reg Himal	WP	Root juice applied to forehead to relieve headache; eyedrops; paste applied externally to boils
<b>Verbenaceae</b>							
<i>Lantana camara</i> L.	Choti podari/ Ujarru	800-1500	2,9,12,13	H	Am Trop	Lf, Fr	The leaves of the Lantana Camara plant contain potent insecticidal properties. That can be used to repel and even kill harmful insects. L. Camara can then be used to prevent malaria due to its ability to repel and even kill mosquitoes
<i>Pseudocaryopteris foetida</i> (D.Don) P.D. Cantino**	Rumri	800-2000	1,7	Sh	Reg Himal	Lf	Root juice given for diarrhea and dysentery
<i>Vitex negundo</i> L.	Banha	800-1600	1,2,4	Sh	As Trop et Sub Trop	Lf, Fr, Rt	A decoction of the stems is used in the treatment of burns and scalds; fresh berries are pounded to a pulp and used in the form of a tincture for the relief of paralysis, pains in the limbs, weakness etc.
<b>Violaceae</b>							
<i>Viola biflora</i> L.	Banafsha	2800-3050	1,7	H	Reg Bor Temp	Lf, Fl	Decoction given to cure stomach ailments like indigestion
<i>V. canescens</i> Wall. **	Banafsha	800-2500	1,2,3,4,5,7	H	Ind Or Malaya China	Lf, Fl	Decoction taken to cure cold, cough and malarial fever
<i>V. pilosa</i> Bl.	Banafsha	1800-2600	1,2,4,7	H	Ind Or Malaya China	Lf, Fl	Leaf decoction given to cure fever and stomachache; decoction prepared from leaves and flowers is effective against sore throat
<b>Zingiberaceae</b>							
<i>Alpinia calcarata</i> (Haw.) Roscoe	Jungli Elaayachi	800-1300	2,3,5	H	Ind Or China	Rh	Decoction of Rhizome used in bronchitis and dyspepsia.
<i>A. zerumbet</i> (Pers.) B.L. Burt & R.M. Sm.	Jungli Adra	800-1300	2,3,5	H	Ind Or	Rh	Used to kill bacteria; and as a stimulant
<i>Cheilocostus speciosus</i> (J.Koenig) C.D. Specht	Kide ki chali	900-800	2,3,7,8,9	H	Austr	Rh, St	Decoction of rhizome is used against dysentery, fever, asthma, intestinal worms, purgative
<i>Globba marantina</i> L.	Banse	800-1700	1,2,4	Sh	Ind Or Burma	Lf	Paste of leaves is applied on wounds and Sores
<i>G. racemosa</i> Sm.		800-1700	1,5	H	Reg Himal	Rt	Paste of roots is applied on headache
<i>Hedychium spicatum</i> Buch.-Ham. ex Sm. **	Ban halder, Shau	800-2200	1,2,3,4,5,7	H	Reg Himal	Rh, Lf	Grounded rhizomes given with milk to purify the blood
<i>Roscoea alpina</i> Royle **		2500-3050	2,3,4,8	H	Reg Himal	Rt	Paste used to heal veterinary cuts and wounds
<b>Zygophyllaceae</b>							
<i>Tribulus terrestris</i> L.	Gokharu	1100-1600	1,4,6	H	Amphig Trop	WP	Decoction is given in urinary diseases in painful micturition, suppression of urine. cough and asthma
<b>Gymnosperms</b>							
<b>Pinaceae</b>							
<i>Abies pindrow</i> (Royle ex D. Don) Royle **	Tosh	2200-	1,2,3	T	Reg Himal	Res, Lf, Wd	Decoction of needles is taken to

		3050					treat cough, asthma
<i>Cedrus deodara</i> (Royle ex D. Don) G. Don**	Kelo, Diar	1500-2300	1,2,3,5	T	Reg Himal	Res, Lf, Wd	A decoction of the wood is used in the treatment of fevers, flatulence, pulmonary and urinary disorders, rheumatism, piles, kidney stones, insomnia, diabetes etc
<i>Pinus roxburghii</i> Sarg.**	Chir	800-2200	1,2,3,4,5	T	Reg Himal	Sd, Wd, Res	A hot decoction of the leaves is applied locally to treat sprains. The resin is applied to boils, heel cracks, and on either side of the head just above the eye to alleviate swelling.
<b>Taxaceae</b>							
<i>Taxus baccata wallichiana</i> (Zucc.) Pilger	Rakhala/ Talispatra	2400-3050	1,2,3	T	Reg Himal	Bk, Lf, Wd	Tea is prepared to treat asthma and high fever. Bark is used for treatment of cancer.
<b>Pteridophytes</b>							
<b>Adiantaceae</b>							
<i>Adiantum capillus-veneris</i> L.	Barin	800-2200	1,2,3,4	H		Frd, Lf	Decoction of fresh leaves used in case of treatment of jaundice. The whole plant is crushed and applied to boils.
<i>A. venustum</i> D. Don		1800-3050	1,2,3,5	H		Frd	Decoction used to expel worms; paste applied to forehead and chest to relieve headache and chest pains
<b>Athyriaceae</b>							
<i>Diplazium esculentum</i> (Retz.) Sw.	Linger	800-1800	1,2,4,5	H		Frd	Boiled vegetable consumed to relieve Constipation
<b>Botrychiaceae</b>							
<i>Botrychium schaffneri</i> Underw.		2000-2800	2,4	H		Rt, WP	Root tuber juice taken in the treatment of roundworms; also used to alleviate constipation.
<b>Dryopteridaceae</b>							
<i>Dryopteris cochleata</i> C. Chr.		800-1600	2,7	H		Rh	Juice/ extract of the dried rhizome is given in epilepsy and leprosy. The paste of fresh rhizome, stem and stipe is externally applied on cuts, wounds, ulcers, swelling and pains.
<i>D. sparsa</i> Kuntz		1800-2900	2,4,7	H		WP	Fresh paste of rhizome and fronds is externally applied in snake and dog bites. The decoction of dried rhizome, stem and stipe is used for blood purification and as tonic for strength
<i>Hippochaete debilis</i> (Roxb. ex Vaucher) Ching	Khasra ghash	800-2000	1,5	H		WP	Infusion of plant considered laxative also applied to carious teeth
<b>Equisetaceae</b>							
<i>Equisetum arvense</i> L.		1800-3050	1,5	H		WP	Decoction applied externally on bleeding wounds to promote healing
<b>Pteridiaceae</b>							
<i>Pteridium aquilinum</i> (L.) Kuhn.		1600-2500	1,2,4	H		Rt, Frd, WP	Leaves has been used to treat sores of any type and also to bind broken bones in place
<i>Pteris biaurita</i> L.	Puai	1500-2000	1,3,7	H		Frd	Fronds used to cure sores and wounds

Abbreviations Used: LF=Life Form; Fn=Fern; H=Herb; Sh=Shrub; T=Tree; Afghan=Afghanistan; Afr=Africa; Am=America; Amphig=Amphigaea; Arab=Arabia; Arct=Arctic; As=Asia; Austr=Australia; Bor=Boreal; Caucas=Caucasus; Centr=Central; Cosmop=Cosmopolitan; et=And Geront=Gerontia; Himal=Himalayan; Ind=Indian; Occ=Occidetalis; Or=Oriental; Reg=Region; Subtrop=Subtropical; Temp=Temperate; Trop=Tropical; Polynes=Polynesia; Ins=Insular; min=Minor; Medit=Mediterranean; Maurit=Mauritius; 1=Shady moist forest; 2=Dry forest; 3=Riverine; 4=Rocky; 5=Bouldary; 6=Degraded; 7=Camping site; 8=Alpine; moist slope; 9=Alpine dry slope; 10=Glacial moraine; 11=Shrubbery; 12=Water coarse; 13=Land Slide; LF=Life form; H= Herb; Sh = Shrub; T = Tree; AP= Aerial part; Bb= Bulb; Bk= Bark; Fl= Flower; Fr= Fruit; Infl= Inflorescence; Lf=Leaf; Rh= Rhizome; Rt= Root; Sd= Seed; St= Stem; Tu= Tuber; WP= Whole plant; Wd= Wood; Res= Resin; Frd= Frond; Tw=Twig La= Latex; \* = Endemic; \*\*= Near endemic

#### 4. Discussion and conclusion

Plant diversity is still indispensable for human well being and provides all or a significant number of the remedies required in health care. Himachal Pradesh is a rich repository of medicinal wealth and the Indian Himalayan Region support 1748 species of medicinal plants of which 643 species are found in Himachal Pradesh (Samant *et al.*, 1998a; Samant *et al.*, 2007a). In present study, 400 species of medicinal importance were reported from the Central Himachal Pradesh. Local people in this region, especially older age people, tribal people and women heavily use these traditionally available medicinal plants for health and believe that these are easily available, less expensive and have no side effects as compared to modern medicine. Occurrence of 400 species of medicinal plants in Central Himachal Pradesh showed the high species richness of medicinal plants in the area. Furthermore, plants growing in this region are of immense use in herbal as well as pharmaceutical industries (Samant *et al.* 2007a). The recorded medicinal plants are highly valuable for various medicinal uses namely stomach disorders, fever, nausea, vomiting, piles, cancer, arthritis, diabetes, dysentery, diarrhea, skin diseases, cuts and wounds, asthma, typhoid, bronchitis, jaundice, kidney and bladder stones, leprosy, and various other diseases. Over exploitation of whole plants, roots, tubers, seeds, fruits, flowers, and barks of most of the species may lead to their early extinction from the area. Amongst medicinal plant, *Allium humile*, *Aconitum heterophyllum*, *Acacia catechu*, *Angelica glauca*, *Andrographis paniculata*,

*Terminalia chebula*, *Acorus calamus*, *Cinnamomum tamala*, *Swertia cordata*, *Boenninghausenia albiflora*, *Taxus wallichiana*, etc. are high value and exploited by the inhabitant for their own use and trade. Occurrence of 169 native, 2 endemic and 61 near endemic medicinal plants indicates the high conservation value of the region. The extinction of medicinal plants and medicine men, however, presents a more hidden health risk. Therefore there is need to make proper policies and do implement these to conserve the forests and medicinal plants. Farmers and local people should be encouraged to cultivate medicinal plants in their barren and fallow lands. Therefore, to maintain the medicinal plant wealth, assessment of population using quadrat method, standardization of propagation protocols for massmultiplication, awareness among the inhabitants and involvement of local inhabitants, Forest Departments in the *ex situ* and *in situ* conservation and promotion under cultivation have been suggested.

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#### 5.1 Photos of some notable medicinal plants



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