

ANALYSIS OF SPECIES DIVERSITY AND INDIGENOUS UTILIZATION OF VASCULAR PLANTS IN TANDI NAG, SACRED GROVES, IN DISTRICT KULLU, HIMACHAL PRADESH

Pooja Kumari, *R. K. Rana and Chanderkanta Vats

Krishi Vigyan Kendra Bajaura, Kullu 175 121, Himachal Pradesh.

Corresponding Author: Dr. R. K. Rana

Krishi Vigyan Kendra Bajaura, Kullu 175 121, Himachal Pradesh.

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ABSTRACT

The inhabitants of the Indian Himalayan Region (IHR) are largely dependent upon the floral diversity for their subsistence, apparently for the fulfillment of their basic needs i.e., fuel, fodder, medicines, agricultural tools, house buildings, essential oil, edible/food, fiber and for various other purposes. Sacred Groves are treasure house of these natural resources. In spite of their high importance, the Sacred Groves of the Indian Himalaya particularly in Himachal Pradesh are poorly explored. Therefore, an attempt has been made to, (i) assess the ethnobotanically important floristic diversity; (ii) investigate indigenous uses of the ethnobotanically important species; (iii) assess the native and endemic species; and (iv) suggest strategy for conservation, in Tandi Nag Sacred Grove, Kullu Himachal Pradesh. Total 163 species representing trees (17 spp.), shrubs (34 spp.), herbs (106 spp.) and ferns (06 spp.) were recorded. Various parts such as whole plants, aerial parts, leaves, flowers, fruits, roots, inflorescence, etc. were used by the inhabitant for curing various diseases/ ailments. Out of total, 84 species were found to be native and 02 species were endemic to Himalayan region. Management options for the conservation and sustainable utilization of the species have been suggested.

INTRODUCTION

Sacred Groves play a vital role in conserving the natural resources. India has a strong tradition of conservation through the aegis of sacred groves and religious prescriptions (Ramakrishnan, 1996; Chandrashekara and Sankar, 1998; Ramanujam and Kadamban, 2001). The role of Sacred Groves in the conservation of biodiversity has long been recognized (Kosambi, 1962; Gadgil and Vartak, 1976; Haridasan and Rao, 1985; Khan et al. 1997). In India 13,270 sacred groves are documented. Out of these 5,627 sacred groves are in Indian Himalayan Region (IHR). The state Himachal Pradesh supports about 5,000 sacred groves and also known as 'Deobhumi' (Source: <http://moef & cc.gov.in>). Sacred Groves are small forest patches which are conserved by local communities as per their socio-cultural and religious practices. Sacred Groves protect several plant and animal species valuable for food, medicinal and other uses (Ramakrishnan, 1998). Sacred Groves acts as reservoirs of rare fauna, and more often rare flora. It is believed that sacred groves are well protected by folk deity and known as undisturbed area which express an important relationship of human beings and nature (Hughes and Chandran, 1998). These groves vary from a tree to a forest and species composition also varies along an altitudinal gradient. Sacred groves are repositories

house of rare species and medicinal plants which have been preserved through the ancient customs, beliefs and respect for nature. The sacred groves contain the ancient cultural and remedies of herbs and traditional medicine. The local communities depend on the sacred groves not only for their medicinal needs but also for timber, wood and non-timber forest products. Thus, the study of ethnobotany have much significance (Amirthalingam, 2012). Although, a lot of work has been carried out in Himachal Pradesh in relation to ethnobotany, and resource utilization pattern including medicinal plants. (Chauhan, 1999; Badola, 2001; Pandey et al., 2004; Sharma & Lal, 2005; Samant & Pant, 2006; Samant et al., 2007a, b,c, 2011, 2012; Negi et al., 2007; Rawat et al., 2009; Singh et al., 2009; Rana & Samant, 2011; Thaplyal et al., 2012; Vidyarthi et al., 2013; Rana et al., 2014; Lal & Samant, 2015; Rana et al., 2015, Sharma et al., 2015; Chand et al., 2016; Chauhan et al., 2016; Thakur et al., 2016; Sharma et al., 2017 etc.), but still the published literature indicates the sacred groves in district Kullu received little attention with reference to economically important floristic exploration. So an attempt has been made to; (i) assess the ethnobotanically important floristic diversity; (ii) investigate indigenous uses of the ethnobotanically important species; (iii) assess the native and endemic species; and (iv) suggest strategy for

conservation, in Tandi Nag Sacred Grove, Kullu Himachal Pradesh.

MATERIAL AND METHODS

Study Area

The selected Sacred Groves namely Tandi is located between in (32°52'30"- 32°62'38" North latitudes and 77°14'51" - 77°14'57" East longitude) Kullu District of Himachal Pradesh. The altitude ranges from 1500 - 2300 m amsl. The approximate area of Tandi Sacred Grove is 3hc. The average climate of study site is temperate with three distinct seasons, winter (November - March), summer (April - June) and rainy (July - September). The mean annual temperature of the study site ranges from 4° - 20° C and snowfall usually occurs during November ends to early February.

Tandi Nag Sacred Grove is located in the middle of a deodar and oak (*Cedrus deodara* and *Quercus leucotrichophora*) forest and fully managed by the local communities who are traditionally bound to the sacred groves. Temple of Tandi Nag though made up entirely of wood of *Cedrus deodara* and *Juglans regia*. Annual rituals are held in, Tandi Nag Sacred Groves for 1 - 3 days during the festival and thousands of people participate from nearby villages and towns. Both the genders are allowed but mainly male plays important role in the management of Sacred Groves. The rituals performed in Sacred Grove to bring in good rainfall, health of livestock and fending off disasters. Cutting of trees are allowed only for the repairing of temples. The sacred grove is composed of temperate forest types which is mainly dominated by coniferous and broad leaved species namely *Cedrus deodara*, *Pinus wallichiana*, *Quercus floribunda* and *Quercus leucotrichophora*. The sacred grove is a collection of valuable plants which are used for various purposes. The inhabitants of the surrounding villages are largely dependent on the rich biodiversity surrounding their area for medicine, wild edibles, fuel, fodder, timber, agricultural tools, fiber, religious, aromatic plants, gums, resins, ornamental plants, essential oils, etc.

Assessment, Sampling, Identification and Data Analysis

Extensive field surveys have been carried out in surrounding villages of Tandi Nag Sacred Groves of Kullu district, Himachal Pradesh. The present study is based on primary survey and secondary data available on the indigenous uses of plants species. For the indigenous uses of the plants species local knowledgeable people were interviewed through the semi-structured questionnaire survey. Information on local names of the plants, parts used, indigenous uses were recorded. The plant samples of each species were collected from each Sacred Grove and identified by using local flora (Chowdhery and Wadhwa, 1984; Aswal and Mehrotra, 1994; Dhaliwal and Sharma, 1999 and Singh and Rawat,

2000) and regional (Deva and Naithani, 1986, Pangtey *et al.*, 1991) floras. However, some information also has been generated with the help of the secondary information (Samant *et al.*, 2007, 2008; Singh *et al.* 2009; Samant *et al.* 2012; Thakur *et al.*, 2012; Vidarthi *et al.* 2013). Index Kewensis, International Plant Name Index and The Plant List were followed for nomenclature and nativity. The species restricted to the IHR were identified as endemic, while those extended to the neighboring countries were identified as near endemic. (Samant *et al.*, 1998, 2011; Rana and Samant, 2011).

Diversity

In the present study total number of 163 species of plants belonging to 67 families and 131 genera were recorded. Among these species tree (17 spp.), shrub (34 spp.), herb (106 spp.), fern (06 spp.) were recorded. out of which Angiosperm (60 families, 122 genera, 152 species), Gymnosperm (1family, 03 genera, 03 species), Pteridophytes, (06 families, 06 genera, 06 species), were present. The families Asteraceae (21spp.), Rosaceae (12spp), Lamiaceae (09 spp.), Poaceae (08 spp.), Urticaceae (07 spp), Fabaceae and Polygonaceae (05spp. each) were species rich families in Tandi Nag Sacred Grove. Among genera, *Artemisia* (03 spp.), *Polygonum* (03 spp.), *Berberis* (02 spp.), *Geranium* (02 spp.), were the dominant genera. 26 species were of multipurpose utility and 24 families were monotypic. Maximum species (Herbs: 85; Shrubs:30; Trees:17; fern; 06) were reported in the altitudinal zone, 1000-2000m. (Fig.2.). Some economically important species of the altitudinal zone, 1000-2000m were *Achyranthes aspera*, *Ainsliaea apera*, *Berberis lycium*, *Cannabis sativa*, *Chenopodium album*, *Cuscuta reflexa*, *Dioscorea deltoidea*, *Jasminum humile*, *Elaeagnus conferata*, *Desmodium elegans*, *Indigofera heterantha*, *Geranium nepalense*, *Swertia angustifolia*, *Ajuga bracteosa*, *Prinsepia utilis* etc. and >2000m were *Valeriana hardwickii*, *Viola canescens*, *Cedrus deodara*, *Daphne papyracea*, *Delphinium denduatum* etc.

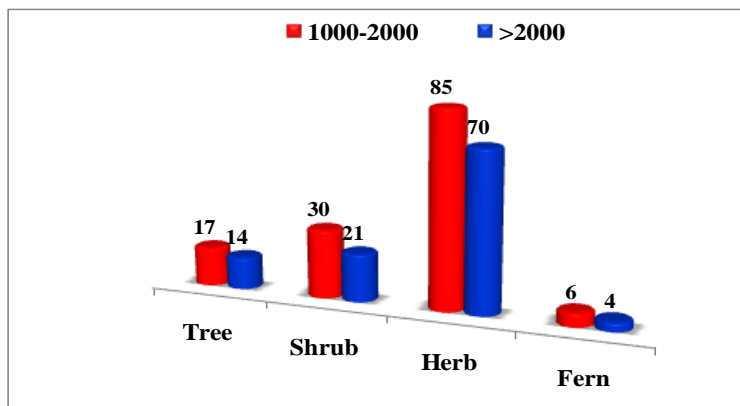


Fig. 2. Altitudinal distribution of ethnobotanically important trees, shrubs and herbs, fern in Tandi Nag Sacred Grove, Himachal Pradesh.

Utilization Pattern

The Plant diversity in Tandi Nag Sacred Grove, is used as medicine (109 spp.), wild edible (43 spp.), fuel (30 spp.), fodder (52 spp.), timber (05 spp.), religious (09 spp.) and Dye (04 spp.). The native communities using different parts of plants for various purposes. Amongst the part used, leaves (60 spp.), whole plant (31 spp.), roots (30 spp.), fruits (20 spp.), seeds (14 spp.), stems/shoots (11 spp.), aerial part (09 spp.), flowers (09 spp.), young inflorescence (01 spp.), bulb (04 spp.), bark (02 spp.) and gum and latex (01 sp., each) were the prominent. (Fig.3). Notable medicinal plants species were *Achyranthes aspera*, *Ajuga bracteosa*, *Berberies aristata*, *Cannabis indica*, *Delphinium denuatum*, *Geranium nepalense*, *Epipactis helloborine*, *Polygonatum cirrhifolium* *Valieriana hardwickii*,

Verbascum thapsus etc.; Edible species were *Berberies lycium*, *Dioscorea deltoidea*, *Juglans regia*, *Ficus palmate*, *Fragaria nubicola*, *origanum vulgare*, *Rubus biflorus*, *Rumex hastatus*, *viburunum mullah* etc.; Fuel species were; *Rhamnus virgatus*, *Pyrus pashia*, *Populus ciliata*, *Sorbaria tomentosa*, *Pinus wallichiana* Fodder species were; *Buddleja crispa*, *carex foliosa*, *Desmodium elegans*, *Deutzia staminea*, *Goldfussia dalhousiana*, *Impatiens amphorata*, *Iris nepalensis*, *Lonicera quinquelocularis*, *Strobilanthes atropurpureus*, etc.; Religious species were, *Origanum vulgare*, *Juglans regia*, *Cannabis sativa*, *Cynodon dactylon*, *Desmodium elegans*, *Jasminum humile*, *Rosa brunonii* etc.; Timber species were *Cedrus deodara*, *Pinus roxburghii*, *Pinus wallichiana*. etc.

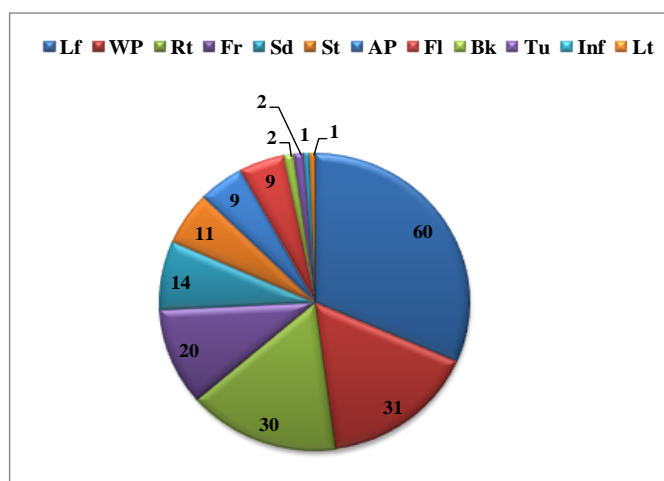


Fig. 3. Statistics of plant parts used. Abbreviations Used: Lf=Leaf; Rt=Root; WP=Whole Plant; Fr=Fruit; Sd=Seed; Bb=Bulb; Tu=Tuber; Rh=Rhizome; Lx=Latex; Rn=Resin; Bk=Bark; St=Stem; Frnd=Frond; Fl=Flower; Inf=Inflorescence; and Frb=Fructing Body.

Indigenous Uses

The local communities of the study area commonly utilize the plants as medicine, wild edible, fodder, fuel, timber, agricultural tools, religious and various other purposes. Among medicinal plants whole plant of *Ajuga intigrifolia* used in cold, fever, diabetes; Root of *Delphinium denuatum* given in case of fever, toothache;

leaves of *urtica dioica* used against gout; flower and leaves of *Viola canescens* used in Asthma, bronchitis, cold, cough, eye diseases; Ash of *Juglans regia* nuts used as tooth powder; Rhizome of *Hedychium spicatum* used in Asthma, blood purifier, bronchitis, nausea; Root of *Parietaria debilis* used for Dandruff, hair problems; Seed of *Verbascum thapsus* used against Asthma, cough,

inflammation, leucoderma, veterinary diseases; Whole plant of *Galium aparine* used as Astringent and also in skin diseases. The powder of the dried root of *Ainslaea aptera* is given with luke water for cure acute gastric pain The local resident of Sared Grove, use *Cedrus deodara*, *Juglans regia*, *Pinus wallichiana* as a source of timber and house building. *Buddleja crispa*, *carex foliosa*, *Desmodium elegans*, *Deutzia staminea*, *Goldfussia dalhousiana*, *Impatiens amphorata*, *Iris nepalensis* were the preferred fodder species. Fiber yielding species were *cannabis sativa*, *Hedychium spicatum* Rope were making from the leaves of *cannabis sativa* and *Hedychium spicatum* used for making mats. *Juglans regia*, *Indigofera heterantha*, *Berberis aristata* were used for dye purpose. 25 species have multipurpose utility *Berberis lycium* used as Medicinal, edible and fuel; *Cynodon dactylon* for medicine, fodder and leaves

used in the religious purposes; *Cedrus deodara* for medicine, fuel, timber and used in the religious purposes.

Nativity and endemism

Among the total (163) species, 84 species were native to the Himalayan region and the remaining species were non-native. 02 species were endemic and 36 species were near endemic to the IHR. The altitudinal zone, **1000-2000m** represented maximum number of native (59), non-native (87) and near endemic (29) species and **>2000m** zone the number of native (52), non-native (67) and near endemic (24) species was relatively low. The endemic species were distributed at both the altitudinal zones. The distribution of native, non-native, endemic and near endemic species at the different altitudinal ranges has been presented in Fig. 4.

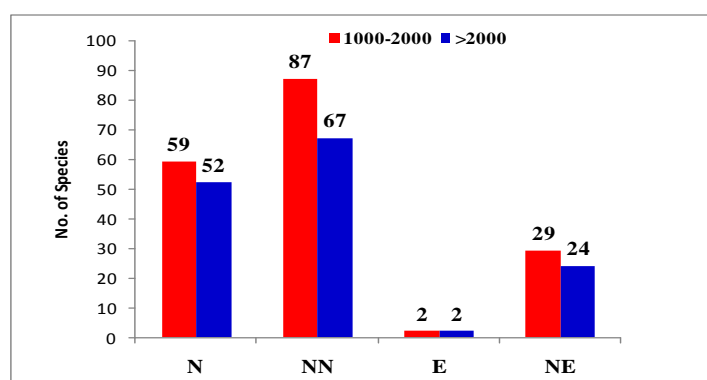


Fig. 4 Altitudinal distribution of native (N), non-native (NN), endemic (E) and near endemic (NE) species in Tandri Nag Sacred Grove, Himachal Pradesh.

DISCUSSION

Sacred groves are the treasure house of rare and valuable species, which have been preserved through the ages due to ancient customs, taboos and respect for nature. The local communities themselves manage the sacred groves. The present study provides comprehensive information on the indigenous uses and traditional practices of the plants used by the inhabitants of the Surrounding Tandri Nag Sacred Grove. Survey of study area indicates ethnobotanical information of 163 plant taxa belonging to 67 families and 131 genera. Two species were found to be endemic and 84 species were native, it indicates the conservation value of sacred groves. Some of the medicinal; *Achyranthes aspera*, *Ajuga integrifolia*, *Berberis aristata*, *Cannabis indica*, *Delphinium dendratum*, *Epipactis helleborine*, *Polygonatum cirrhifolium* and *Valeriana hardwickii*; fuel, timber and fodder; *Quercus leucotrichophora*, *Juglans regia*, *Cedrus deodara*, *Pinus wallichiana*, *Pyrus pashia* and *Populus ciliate* were recorded in the Sacred Groves also grow in other region and are utilized by the communities residing elsewhere. Local communities living in the surrounding villages of Tandri Nag Sacred Grove depends on the natural resources of Sacred grove but in restricted manner, Cutting of trees are allowed only for the repairing of temples. The regulated utilization of

socioeconomically important species in sacred grove aids in their germplasm conservation, this reveals the role of sacred groves in conservation. The collection of fuel and fodder species from sacred grove is allowed to local communities in regulated manner, but grazing of animals is not in regulated manner, which poses threat to many existing species. Therefore, there is a need for proper management in the Sacred grove.

REFERENCES

1. Anonymous(1883-1970) Index Kewensis Plantarum Phanerogamarum Vol.1-2 (1883-1885) and Suppl. (1886-1970) (Oxford: Clarendon Press).
2. Aswal, B.S. and Mehrotra, B.N., 1994. Flora of Lahaul-Spiti. (A Cold Desert in North-West Himalayas). Bishen Singh Mahendra Pal Singh, Dehradun.
3. Badola, H. K.(2001) Medicinal plant diversity of Himachal Pradesh, In. Samant, S.S., Dhar, U. and Palni, L.M.S. (eds.) Himalayan Medicinal Plants: Potential and Prospects. Gyandodaya Prakashan, Nainital: 87-116.
4. Butola, J.S. & S.S. Samant (2012). Medicinally important species of *Hypericum* in Indian Himalaya: Need for more exploration for Socio-economic development. Medicinal Plants, 4(2): 104-110.

5. Chauhan, N.S. (1999). Medicinal and Aromatic Plants of Himachal Pradesh. Indus Publishing Company, New Delhi, India.
6. Chowdhery, H.J. & Wadhwa, B.M. 1984. Flora of Himachal Pradesh, Vol. 1-3. Botanical Survey of India, Calcutta.
7. Dhaliwal, D.S. and Sharma, M. 1999. Flora of Kullu District (Himachal Pradesh). Bishen Singh Mahendra Pal Singh, Dehra Dun.
8. Dhar, U. and Samant, S.S. (1993) Endemic diversity of Indian Himalaya. I. Ranunculaceae and II. Paeoniaceae. *J. Biogeography*, 20: 659-668.
9. Gadgil M. and Vartak V.D. (1976). Sacred groves of Western Ghats of India. *Economic Botany*, 30: 152-160.
10. Guha, Ramachandran. (2000). *The Unquiet Woods*. University of California Press.
11. Khan M.L., Menon S. and Bawa K.S. (1997). Effectiveness of the protected area network in biodiversity conservation a case study of Meghalaya state. *Biodiv. Conserv.*, 6: 853-868.
12. Kosambi D.D. (1962). *Myth and Reality*. Popular Press, Bombay, India
13. Murti, S.K. 2001. Flora of Cold Desert of Western Himalaya. Vol.I (Monocotyledons). Botanical Survey of India, Calcutta.
14. Negi, V.M., Dutt, B. and Chauhan, N.S. (2007) Threatened medicinal and aromatic plants of Sangla valley in Himachal Himalaya- causes and remedies. *International Journal of Ecology and Environmental Sciences*, 33: 219-223.
15. Polunin, O. and Stainton, A. 1984. *Flowers of the Himalaya*. Oxford University Press, Delhi.
16. Rana, M.S. and Samant, S.S. 2011. Diversity, indigenous uses and conservation status of medicinal plants in Manali Wildlife Sanctuary, Northwestern Himalaya. *Ind. J. Trad. Know*, 10(3): 439-459.
17. Rodger, W.A. and Panwar, W.S. 1988. Planning a wildlife protected area network in India. Vol. 1&2. Wildlife Institute of India, Dehradun.
18. Rawat, G.S., Sathyakumar, S. & Prasad, S.N. 1999. Plant species diversity and community structure in the outer fringes of Kedarnath Wildlife Sanctuary, Western Himalaya: Conservation implications. *Indian Forester*, 125(9): 873-882.
19. Samant, S.S., Dhar, U. and Palni, L.M.S. 1998. Medicinal Plants of Indian Himalaya: Diversity Distribution Potential Values. Gyanodaya Prakashan, Nainital.
20. Samant, S.S. and Pant, S. 2003. Diversity, distribution pattern and traditional knowledge of the Sacred Plants in Indian Himalayan Region. *Ind. J. For.*, 26(3): 222-234.
21. Samant, S.S. and Dhar, U. 1997. Diversity, endemism and economic potential of wild edible plants of Indian Himalaya. *Int. J. Sus. Dev. & Worl. Ecol.*, 4: 179-91.
22. Samant, S.S., S. Vidyarthi, Pant, S., P. Sharma, S. Marpa & P. Sharma (2012). Diversity, Distribution, Indigenous Uses and Conservation of the Medicinal Plants of Indian Himalayan Region Used in Cancer. *Journal of Biodiversity*, 2(2): 117-125.
23. Thakur, Shalu Devi, K.S. Kapoor & S.S. Samant (2011). Diversity and indigenous uses of sacred plants in Tirthan Wildlife Sanctuary, Himachal Pradesh. *Journal of Non-Timber Forest Products*, 18(2): 123-128.
24. Vidyarthi, Shalini, S. S. Samant & Pankaj Sharma (2013). Traditional and indigenous uses of medicinal plants by local residents in Himachal Pradesh, North Western Himalaya, India. *International Journal of Biodiversity Science, Ecosystem Services & Management*, 9(3): 185-200.

Appendix: Diversity, distribution and utilization pattern of economically important plants in Tandri Nag							
Botanical Name	Local Name	LF	AR (m)	Nativity	Part Used	Uses	End
Acanthaceae							
<i>Barlaria cristata</i> L.	-	H	1500-2300	Ind Or Burma	WP	Medicinal (Anaemia, body pain, headache, swelling in legs, toothache); Edible	-
<i>Dicliptera roxburghiana</i> Nees	-	H	1700-2300	Ind Or	WP	Medicinal (Tonic)	-
<i>Goldfussia dalhousiana</i> Nees	-	H	1500-2100	Reg Himal	WP	Fodder	-
<i>Strobilanthes atropurpureus</i> Nees	-	H	1500-2300	Reg Himal	AP	Fodder	E
Aceraceae							
<i>Acer cappadocicum</i> Gledt.	Mandru	T	1800-2300	As min	Lf, St	Fodder; Agricultural tool; Fuel	-
Amaranthaceae							
<i>Achyranthes aspera</i> L.	Puthkanda/Umalkudi	H	1500-2000	As Trop	WP	Medicinal (Asthma, boils, bronchitis, cold, cough, dysentery, germicide, headache, laxative leucoderma, piles, pneumonia, rheumatism, scabies, skin diseases, sore, stomachache, tonic, toothache, whooping cough, wounds, veterinary diseases); Edible	-
<i>A. bidentata</i> Bl.	Puthkanda/Umalkudi	H	1500-2000	Reg Trop	WP	Medicinal (Blisters in mouth, cholera, scorpion sting, swelling, whooping cough)	-
Anacardiaceae							
<i>Cotinus coggygria</i> Scop.	Tung	Sh	1500-2000	Reg Medit Oriens Reg Himal China	Fr, Fl	Dye	-
<i>Toxidendron wallichii</i> (Hk.f.) Kuntze	-	T	1600-2000	Reg Himal China Ins Sandvic	Fr, Wd	Medicinal (Gastric problem, skin diseases); Edible; Fuel	-
Anacardiaceae							
<i>Arisaema intermedium</i> Bl	Kira aloo	H	1500-1900	Reg Himal	Tu	Medicinal (epilepsy, tetanus, cold and cough)	NE
<i>A. jacqueomontii</i> Bl	-	H	1800-2300	Reg Himal	RT, fl	Medicinal(antidote to snake bite); edible	NE
Apiaceae							
<i>Chaerophyllum reflexum</i> Lindl.	Bhae	H	1500-2300	Reg Himal	Rt	Edible	-
<i>Hydrocotyle javanica</i> Thunb.	-	H	1700-1900	Java	Lf	Medicinal (Dysentery, indigestion, fever)	-
Araliaceae							
<i>Hedera nepalensis</i> K. Koch	-	H	1800-2300	Reg Himal Europe Afr Bor As Temp	Fr, Lf	Medicinal (Cold, cough, stimulant, diaphoretic, cathartic, rheumatism); Edible	-
Asteraceae							
<i>Ainsliaea aptera</i> DC.	Sathjilari	H	1800-2300	Reg Himal	Rt	Medicinal (Stomachache)	NE
<i>Anaphalis nepalensis</i> (Spreng.) Hand.-Mazz.	-	H	1500-1900	Reg Himal	Lf	Misc. (Lit the fire)	-

<i>A. triplinervis</i> (Sims.) Cl.	-	H	1800-2300	Reg Himal	WP, Lf	Medicinal (Diuretic); Misc.(Flint for making fire)	-
<i>Artemisia nilagarica</i> (Cl.) Pamp.	Jhaola	H	1500-1800	Reg Temp Bor	Lf, Rt, Sd	Medicinal (Abscess, analgesic, anthelmintic, antiseptic, asthma, ear complaints, epilepsy, febrifuge, headache, nervous disorders, skin diseases, sores, stomachache, tonic, wounds, insect repellent) ; Religious	-
<i>A. roxburghiana</i> Bess.	Jhaola	H	2000-2300	Reg Himal	Lf	Medicinal (Pimple, Sores)	NE
<i>Bidens pilosa</i> L.	-	H	1800-2300	Reg Trop	WP	Medicinal (Cough, cuts, ear and eye complaints, headache, inflammation, leprosy, skin diseases, snake bite, sores, wounds); Edible	-
<i>Blumea laciniata</i> (Roxb.) DC.	-	H	1500-2100	Ind Or Malaya China	WP	Medicinal (Blood purifier)	-
<i>Cirsium wallichii</i> DC.	Bhungsha	H	1500-2300	Reg Himal	WP	Medicinal (Cough, Swelling, headache, pneumonia)	NE
<i>Crassocephalum crepidioides</i> (Benth.) Moore	-	H	1500-1700	Afr Trop	Lf	Medicinal (Constipation, Stomachache, Headache)	-
<i>Erigeron bonariensis</i> L.	-	H	1500-2000	Am Austr	Lf	Medicinal (Rheumatism, mouth, throat and skin diseases)	-
<i>E. multiradiatus</i> (DC.) Cl.	-	H	2000-2300	Reg Himal	WP	Medicinal (Tonic, renal and stomach pain)	-
<i>Galinsoga parviflora</i> Cav.	-	H	1500-2000	Mexic North Am	Lf	Medicinal (Snake bite, Bleeding)	-
<i>Gerbera gossypina</i> (Royle) Beauv.	Kopar	H	1700-2100	Reg Himal	Rt	Medicinal (Blood pressure, gastric disorders); Religious	NE
<i>Gnaphalium thomsonii</i> D.Don	Dhoop	H	1500-2300	Reg Magell	AP	Religious	-
<i>G. hypoleucum</i> DC.	-	H	1500-1800	As Trop	WP	Medicinal (Cuts, wounds)	-
<i>Inula cappa</i> DC.	-	H	1500-1800	Reg Himal Java China	Lf	Medicinal (Headache, urinary complaints); Fodder	-
<i>Lactuca dissecta</i> D. Don	-	H	2000-2300	Reg Himal	Fl	Edible	-
<i>Myriactis nepalensis</i> Less.	-	H	1500-2100	Reg Himal As Centr	Lf	Edible	-
<i>Solidago virga-aurea</i> L.	-	H	1500-2300	Reg Bor Temp	WP	Medicinal (Anthelmintic, antifungal, anti-inflammatory, carminative, diuretic, febrifuge)	-
<i>Tagetes minuta</i> L.	Basala Ghaa	H	1500-2000	Am Trop	WP	Misc. (Aromatic oil)	-
<i>Taraxacum campylodes</i> G.E. Haglund	-	H	1700-2300	Am Trop	WP	Medicinal (Blisters, blood purifier, bowel complaints, diuretic, dysentery, gastric, ulcer, headache, kidney diseases, liver complaints, tonic, wounds); Edible	-
Balsaminaceae							
<i>Impatiens amphorata</i> Edgew.	-	H	2000-2300	Reg Himal	Sd, WP	Edible; Fodder	-
Berberidaceae							

<i>Berberis aristata</i> DC.	Kamushal	Sh	2000-2300	Ind Or	WP	Medicinal (Antidote to snake bite, malaria, piles); Edible; Fuel	NE
<i>B. lycium</i> Royle	Kamushal	Sh	1500-1900	Reg Himal	Rt, Fr	Medicinal (Jaundice, eye diseases); Edible; Fuel	NE
Boraginaceae							
<i>Cyanoglossum wallichii</i> G. Don.	-	H	1900-2300	Ind Or Burma	Rt	Medicinal (Dyspepsia, digestive disorders)	-
Buddlejaceae							
<i>Buddleja crispa</i> Benth.	-	Sh	1500-2000	Reg Himal Burma	Lf, Wd	Fodder; Fuel	NE
Cannabaceae							
<i>Cannabis sativa</i> L.	Bhang	H	1500-2000	As Center Reg Himal	Fl, Lf, Sd	Medicinal (Antihelminthic, appetite, bowel, bronchitis, cold, cough, convulsion, cramps, epilepsy cuts, dyspepsia, ear complaints, eye dysfunctions, gonorrhea, laxative, narcotic, stimulant, paralysis, piles, skin, eruption, sleep pills, sores, tetanus); Edible; Fiber	-
Caprifoliaceae							
<i>Lonicera quinquelocularis</i> Hardw.	-	Sh	1500-2300	Reg Himal	Lf, Wd	Fodder; Fuel	-
<i>Viburnum mullaha</i> Buch.-Ham. ex D. Don	-	Sh	1700-2200	Reg Himal	Fr, Lf, Wd	Edible; Fodder; Fuel	-
Caryophyllaceae							
<i>Cerastium cerastoides</i> (L.) Britton.	-	H	2100-2300	Reg Himal	WP	Medicinal (Cough)	-
<i>Stellaria media</i> (L.) Vill.	Badyala	H	1500-2300	Reg Temp	WP	Medicinal (Bone fracture); Edible	-
Celastraceae							
<i>Euonymus tingens</i> Wall.	-	T	1800-2300	Reg Himal	Bk, Lf	Medicinal (Eye diseases); Fodder; Dye	-
Chenopodiaceae							
<i>Chenopodium foliosum</i> Asch.	Bathu	H	1500-2300	Reg Bor et Austr	Lf	Edible	-
<i>Dysphania ambrosioides</i> (L.) Mosyakin & Clemants	-	H	1800-2300	Reg Temp et Trop	Lf	Medicinal (Anthelmintic, influenza, Pneumonia)	-
Convolvulaceae							
<i>Convolvulus arvensis</i> L.	-	H	1500-2300	Geront. temp	WP	Medicinal (Purgative, burns, bruises)	-
<i>C. oblongus</i> Wall.	-	Sh	1700-2000	Reg Himal	St	Fuel	-
Coriariaceae							
<i>Coriaria nepalensis</i> Wall.	-	Sh	1500-2300	Reg Himal China	St, Lf, Fr	Medicinal (Emetic); Edible; Agricultural tools	-
Crassulaceae							
<i>Rosularia rosulata</i> (Edgew.) H. Ohba	-	H	1500-2200	Reg Himal	Lf	Medicinal (Skin disease)	NE
Cyperaceae							
<i>Carex foliosa</i> D. Don	-	H	1500-2000	Reg Himal	WP	Fodder	NE
Dioscoreaceae							
<i>Dioscorea deltoidea</i> Wall. ex Kunth	Shingli-Mingli	H	2000-2300	Ind Or	Tu	Medicinal (Dysentery, piles); Edible	-
Elaeagnaceae							
<i>Elaeagnus conferta</i> Roxb.	Ghaiyeen	Sh	1550-	Ind Or	Fl, Fr	Medicinal (Sores, ulcer);	NE

			2100			Edible	
Ericaceae							
<i>Lyonia ovalifolia</i> (Wall.) Drude	-	T	1500-2300	Reg Himal Japan	WP	Medicinal (Boils, pimples, skin diseases, wormifuge, wounds); Fuel	-
Fabaceae							
<i>Cajanus scarabaeoides</i> (L.) Thouars	-	H	1500-1750	Austr	WP	Med (Child birth, night fever post natal, Smallpox, Sterility in female)	-
<i>Desmodium elegans</i> DC.	Safed kathi	Sh	1800-2300	Reg Himal China	AP, Rt, Wd	Medicinal (Epilepsy, carminative); Fodder; Fuel; Religious	-
<i>Indigofera heterantha</i> Wall. ex Brand.	Kaali kathi	Sh	1500-2300	Reg Himal	Lf, Wd	Medicinal (Veterinary diseases, urinary problems); Fodder; Fuel	-
<i>Trifolium repens</i> L.	Malori	H	1500-2300	Geront Bor Temp	WP	Medicinal (Dandruff)	-
<i>Vicia rigidula</i> Royle	-	H	1700-2300	Reg Himal	WP	Fodder	-
Fagaceae							
<i>Quercus leucotrichophora</i> Cam.	Baan	T	1500-2300	Reg Himal	Wd, Lf	Fodder; Fuel; Timber	-
Gentianaceae							
<i>Swertia cordata</i> (G. Don) Wall. ex Cl.	Charaita	H	2000-2400	Reg Himal	WP	Medicinal (Anthelmintic, antiperiodic, appetizer, laxative)	NE
Geraniaceae							
<i>Geranium nepalense</i> Sw.	-	H	1500-2300	Ind Or China	Rt	Medicinal (Cuts, jaundice, toothache, ulcer, wounds, stomach complaints); Dye	-
<i>G. wallichianum</i> D. Don ex Sw.	-	H	1900-2300	Reg Himal	WP	Fodder	NE
Haemodoraceae							
<i>Ophiopogon intermedius</i> D. Don	-	H	1500-2100	Ind Or	WP	Fodder	-
Hydrangeaceae							
<i>Deutzia staminea</i> R. Br.	-	Sh	1500-2300	Reg Himal	Lf, Wd	Fodder; Fuel	NE
<i>Philadelphus tomentosus</i> Wall. ex. Royle	-	Sh	1600-2300	Reg Himal	Lf	Fuel	-
Iridaceae							
<i>Iris decora</i> Wall.	Zora ghaa	H	2000-2300	Reg Himal	Lf	Fodder	NE
Juglandaceae							
<i>Juglans regia</i> L.	Khor	T	1500-1600	As Occ Reg Himal	Fr, Wd, Lf	Medicinal (toothache, Skin problems) Edible; Timber; Dye; Misc. (Insecticide)	NE
Lamiaceae							
<i>Ajuga integrifolia</i> Buch.- Ham.	Neelkanthi	H	1700-2300	Afr Trop Ind Or As Or	Lf	Medicinal (Ascariasis)	-
<i>A. parviflora</i> Benth.	Neelkanthi	H	2200-2300	Reg Himal	Lf	Medicinal (Febrifuge)	NE
<i>Clinopodium umbrosum</i> (M. Bieb.) Kuntze	-	H	1500-2300	Oriens Ind Or	WP	Medicinal (Astringent, carminative, heart tonic); Fodder	-
<i>Elsholtzia fruticosa</i> (Don) Rehd.	-	Sh	1500-2100	Reg Himal	Lf, Fr, Sd	Medicinal (Relieve sciatica); Edible	-

<i>Isodon coetsa</i> (Buch.-Ham. ex D. Don) Kudô	-	H	2000-2300	Reg Himal Burma	Lf	Medicinal (Gastric complaints)	-
<i>I. rugosus</i> (Wall. ex Benth.) Codd	-	Sh	1500-2300	Reg Himal	Lf	Medicinal (Fever, stomach pain, vermicide, insecticide); Misc. (Broom making)	-
<i>Nepeta ciliaris</i> Benth.	-	H	1800-2300	Reg Himal	Lf	Medicinal (Malarial fever)	NE
<i>Origanum vulgare</i> L.	Ban tulasi	H	1600-2300	Europe As	WP	Medicinal (Cold, fever, hysteria, influenza, menstrual complaints, stimulant, tonic); Edible; Religious	-
<i>Phlomis bracteosa</i> Royle ex Benth.	-	H	1500-2300	Reg Himal	Fl	Medicinal (Eye diseases)	NE
Lauraceae							
<i>Machilus duthiei</i> King	-	T	1800-2300	Reg Himal	Wd, Lf	Fuel; Fodder	NE
Liliaceae							
<i>Polygonatum cirrhifolium</i> (Wall.) Royle	Salam Mishri	H	1800-2300	Reg Himal As Bor	Tu	Medicinal (Aphrodisiac, blood purifier, cuts, wounds)	-
Linaceae							
<i>Reinwardtia indica</i> Dumort.	-	H	1500-2300	Ind Or	AP	Medicinal (Mouth sores); Fodder	NE
Malvaceae							
<i>Malva sylvestris</i> L.	-	H	1800-2300	Europe et Afr	WP	Medicinal (Cough, emollite, pectoral complaints, piles, ulcer, urine problems); Edible	-
<i>Malva verticillata</i> L.	-	H	1800-2300	Europe As et Afr Bor	Lf, Rt, Sd	Medicinal (Cough, pectoral complaints, piles, ulcer, urine complaints); Edible	-
Meliaceae							
<i>Toona ciliata</i> Roem.	Daral	T	1500-2100	Malaya Austr	Bk, Fr, Lf	Medicinal (Antiseptic, dysentery, bronchitis, fever, gastric troubles); Fodder	-
<i>T. sinensis</i> (Juss.) M. Roem.	Daran	T	1600-2300	Malaya Austr	St	Medicinal (Antiseptic, gastric troubles); Fodder; Fuel; Agricultural tools	-
Moraceae							
<i>Ficus palmata</i> Forsk.	Fagoo	T	1500-2000	Afr Trop Arab Ind Or	Fr, Lf, St,	Fuel; Fodder; Edible	-
<i>F. sarmentosa</i> Ham. ex Sm.	-	Sh	1500-2300	Reg Himal	Fr, Lf	Edible; Fodder	-
<i>Morus serrata</i> Roxb.	Cheemu	T	1500-2300	Reg Himal	Fr, Lf	Edible; Fodder; Fuel	NE
Myrsinaceae							
<i>Myrsine africana</i> L.	-	Sh	1700-2300	Reg Himal Afr Austr et Trop Ins Azor	AP	Medicinal (Colic pain, vermifuge); Fodder	-
Oleaceae							
<i>Jasminum humile</i> L.	-	Sh	1500-2300	Reg Himal	Lf	Medicinal (Skin disease, blood disease, heart problems); Fodder; Religious	-
<i>J. officinale</i> L.	-	Sh	2000-2300	Ind Bor Occ China	Fl, Lf, Rt	Medicinal (Ringworm); Fodder; Religious	-
Orchidaceae							
<i>Epipactis helleborine</i> (L.) Crantz	-	H	2200-2300	Reg Himal	Lf, Rh	Medicinal (Fever, aphrodisiac)	-

<i>Habenaria intermedia</i> D.Don	-	H	1500-2300	Reg Himal	Lf, Rt	Medicinal (Tonic, fever, skin diseases and blood disorder)	E
Oxalidaceae							
<i>Oxalis corniculata</i> L.	Malori	H	1500-2100	Amphig Temp et Trop	WP	Medicinal (Appetizer, cooling, cough, cuts, dysentery, epilepsy, eye complaints, fever, jaundice, scurvy, skin diseases, stomachache, swelling); Edible	-
Poaceae							
<i>Arundinella nepalensis</i> Trin.	-	H	1500-2000	Ind Or	WP	Medicinal (Ointment)	-
<i>A. pumila</i> Steud.	-	H	1500-2000	Abyss	WP	Fodder	-
<i>Drepanostachyum falcatum</i> (Nees) Keng f	Rigal	Sh	1500-1900	Reg Himal	St	Fodder; Fuel; Misc. (Baskets, mats, hats)	-
<i>Oplismenus latifolius</i> Haenke ex Steud.	-	H	2000-2300	Cosmop Trop	WP	Fodder	-
<i>Saccharum spontaneum</i> L.	-	H	1800-2300	Geront Trop	Lf	Medicinal (Asthma, cholera); Fodder	-
<i>Sporobolus diandrus</i> (Retz.) Beauv.	-	H	1500-1800	As et Austral Trop	WP	Fodder	-
<i>Themeda anathera</i> (Nees ex Steud.) Hack.	-	H	1500-1800	Ind Or	WP	Fodder	NE
Polygonaceae							
<i>Persicaria amplexicaulis</i> (D.Don) Ronse Decr.	-	H	2100-2300	Nepal Afg Ind Bhutan China	Lf, Rt	Medicinal (Cough, dysentery, tonic); Fodder	-
<i>P. hydropiper</i> L.	-	H	1600-2300	Reg Temp. Bor et Austr	Infl, Lf	Medicinal (Ringworm, skin disease)	-
<i>P. nepalensis</i> Meissn.	-	H	1500-2300	Reg Himal	Lf	Medicinal (Swelling); Fodder; Edible	-
<i>Rumex hastatus</i> D. Don	-	H	2000-2300	Reg Himal	Lf	Edible	-
<i>R. nepalensis</i> Spr.	Malora	H	1800-2300	As Occ Ind Or Malaya Afr Austr	Lf, Rt	Medicinal (Boils, colic, cooling, diuretic, purgative, scurvy, swelling of muscles); Fodder	-
Primulaceae							
<i>Androsace rotundifolia</i> Hardw.	-	H	2000-2300	Reg Himal China	Lf	Medicinal (To control menstrual flow and conception)	NE
<i>Lysimachia lobelioides</i> Wall.	-	H	1500-2200	Reg Himal Java	Lf	Medicinal (Snake bite)	-
Ranunculaceae							
<i>Clematis acuminata</i> DC.	-	Sh	1500-2300	Reg Himal	AP	Medicinal (Rheumatism, headaches, syphilis, gout, bone disorder, skin diseases)	NE
<i>C. buchananiana</i> DC.	-	Sh	1500-2100	Reg Himal	Lf, Rt	Medicinal (Skin diseases, sores, tumors)	-
<i>Delphinium denuatum</i> ex Hk. F. & Thomson	-	H	1800-2400	Reg Himal	Lf, Rt	Medicinal (toothache, antidote to snake bite)	NE
<i>Ranunculus diffusus</i> DC.	-	H	1500-2300	Ind Or Malaya	WP	Medicinal (Boils)	-
<i>Thalictrum foliolosum</i> DC.	Mamiri	H	1500-2300	Reg Himal	Rt	Medicinal (Abdominal pain, blood purifier, eye diseases,	NE

						luecoderma, rheumatism); Fodder	
Rhamnaceae							
<i>Rhamnus triqueter</i> Wall.	-	Sh	1600-2300	Reg Himal	Bk, Fr	Medicinal (Blood pressure, boils, scabies, skin diseases, tonic)	NE
<i>R. virgatus</i> Roxb.	-	Sh	1500-2100	Ind Or Bor	Fr, Lf, Wd	Medicinal (Emetic, purgative, infection of spleen); Fodder, Fuel	-
Rosaceae							
<i>Agrimonia pilosa</i> Ledeb.	-	H	1500-2200	Reg Bor Temp	AP, Rt	Medicinal (Cough, urinary problems)	-
<i>Fragaria nubicola</i> L.	-	H	1500-2300	Reg Temp	Fr	Edible	-
<i>F. vesca</i> L.	-	H	1600-2300	Reg Temp	Fr	Edible	NE
<i>Prinsepia utilis</i> Royle	Bhekhal	Sh	1500-2300	Reg Himal	Sd, Fr	Medicinal (Burns, cuts, rheumatism, wounds); Edible	-
<i>Prunus cerasoides</i> Don	Paja	T	1500-1800	Reg Himal	Lf, Fr	Fodder; Edible; Fuel; Religious	-
<i>P. cornuta</i> (Wall. ex Royle) Steud.	Jammu	T	1500-2300	Europe As Bor	Lf, Wd	Fodder; Fuel	-
<i>Pyrus pashia</i> Buch.-Ham. ex Don	Shegal	T	1500-2300	Reg Himal	Lf, Fr, Wd	Edible; Fodder; Fuel	-
<i>Rosa brunonii</i> Lindl.	Kunjaphool	Sh	1500-2300	Oriens	Rt, Wd, Fr, Lf	Medicinal (Diarrhoea, wounds, ophthalmia, pain); Fuel; Fodder; Edible	-
<i>Rubus biflorus</i> Buch.-Ham. ex Sm.	Aache	Sh	1700-2100	Reg Himal	Fr, Rt	Medicinal (Diarrhoea); Edible	-
<i>R. ellipticus</i> Don	Aache	Sh	1500-1900	Ind Or	Fr, Rt	Medicinal (Dysentery, malaria, stomachache, worms); Edible	-
<i>Sorbaria tomentosa</i> (Lindl.) Rehder	-	Sh	1500-2300	Reg Himal As Bor	Wd	Fuel	-
<i>Spiraea canescens</i> D. Don	Chaku	Sh	2000-2300	Reg Himal	AP	Fodder	NE
Rubiaceae							
<i>Galium aparine</i> L.	-	H	1500-2300	Reg Bor Temp et Magell	WP	Medicinal (Astringent, skin diseases)	-
<i>G. rotundifolium</i> L.	-	H	1500-2000	Europe As Temp	AP	Medicinal (Bronchitis, tonsils); Fodder	-
<i>Rubia cordifolia</i> L.	-	H	1900-2300	As Trop et Temp Afr Trop	R, St	Medicinal (Tonic, astringent, antidote, dysentery)	-
Rutaceae							
<i>Boenninghausenia albiflora</i> (Hk.) Reichb.	-	H	1700-2000	Reg Himal Japan	Rt	Medicinal (Antiseptic, wounds); Misc. (Insecticide)	-
Salicaceae							
<i>Populus ciliata</i> Wall. ex Royle	Chloona	T	1900-2300	Reg Himal	Wd	Fuel	-
Sambucaceae							
<i>Viburnum mullah</i> Buch.- Ham. Ex D. Don	-	Sh	2000-2300	Amer	Lf, Wd, Fr	Fodder, Fuel, Edible	
Saxifragaceae							
<i>Bergenia ciliata</i> (Hew.) Stercb.	Pashan bhed	H	1700-2300	Reg Himal	Rt, Lf	Medicinal (Asthma, boils, cuts, wounds, burns, fever, liver complaints, ophthalmia, piles, thirst, kidney stones,	NE

						urine complaints, diarrhoea of cattle); Edible	
Scrophulariaceae							
<i>Scrophularia himalensis</i> Royle ex Benth.	-	H	1900-2300	Reg Himal	Lf	Misc. (Insecticide)	E
<i>Verbascum thapsus</i> L.	Ban Tambacoo	H	1500-2300	Europe Afr Reg Himal	Sd	Medicinal (Asthma, cough, inflammation, leucoderma, veterinary diseases)	-
<i>Veronica biloba</i> L.	-	H	1500-2300	Reg Himal et Cauc Sibir	AP	Fodder	-
Solanaceae							
<i>Solanum indicum</i> L.	-	H	1500-2200	Reg Trop	Fr	Medicinal (Asthma, fever, colic)	-
<i>S. americanum</i> Mill.	Makoy	H	1900-2100	Amphig	Fr, Lf, Fl, Sd	Medicinal (Antidote, boils, cough, dysentery, ear complaints, fever, eye complaints, skin diseases, urinary complaints)	-
Thymelaeaceae							
<i>Daphne papyracea</i> Wall. ex Stued.	Gandhri	Sh	1700-2100	Reg Himal	Rt, Lf	Medicinal (Intestinal complaints); Fodder; Fibre	NE
Urticaceae							
<i>Debregeasia longifolia</i> (N. Burman) Wedd.	-	Sh	1500-1700	Ind Or	Bk, Lf	Fodder; Fibre; Fuel	-
<i>Girardinia diversifolia</i> (Forsk.) Gaud.	Karal	H	1900-2300	Ind Or Malaya	Bk, St	Fibre	-
<i>Parietaria debilis</i> Frost.	-	H	1500-2000	Reg Trop et Sub Trop	Rt	Medicinal (Dandruff, hair problems)	-
<i>Pilea scripta</i> (Buch.-Ham. ex Don) Wedd.	-	H	1500-2300	Reg Himal	AP	Fodder	-
<i>P. umbrosa</i> Wedd.	-	H	1500-2300	Reg Himal	Lf	Medicinal (Wounds)	-
<i>Pouzolzia hirta</i> (Bl.) Hassk.	-	H	1800-2300	As et Austral Trop	Rt	Medicinal (Hair tonic)	-
<i>Urtica dioica</i> L.	Kungsh	H	1500-1900	Reg Bor Temp	Lf	Medicinal (Gout); Edible	-
Valerianaceae							
<i>Valeriana hardwickii</i> Wall.	Nihanu	H	1600-2300	Reg Himal Malaya	WP	Medicinal (Skin diseases)	-
<i>V. jatamansi</i> Jones	Mushkbala	H	1900-2300	Reg Himal	WP	Medicinal (Antidote to sting of insects, hysteria, neurosis, skin diseases); Religious	-
Violaceae							
<i>Viola canescens</i> Wall.	Banafsha	H	1500-2300	Ind Or Malaya China	Lf, Fl	Medicinal (Asthma, bronchitis, cold, cough, eye diseases)	NE
<i>V. pilosa</i> Bl.	Banafsha	H	5100-2100	Ind Or Malaya China	Lf, Fl	Medicinal (Asthma, bronchitis, cold, cough, wounds)	-
Vitaceae							
<i>Parthenocissus semicordata</i> (Wall.) Planch.	Karmai	Sh	1600-2300	Ind Or	Fr, Lf	Edible; Fodder	NE
Zingiberaceae							
<i>Hedychium spicatum</i> Buch.-Ham. ex Sm.	Ban Haldi	H	1500-2300	Reg Himal	Rh, Lf	Medicinal (Asthma, blood purifier, bronchitis, nausea); Fodder; Misc. (Mats)	NE

Gymnosperms							
Pinaceae							
<i>Cedrus deodara</i> (Royle ex D. Don) G. Don	Deodar/ Devdar	T	1800- 2300	Reg Himal	Res, Lf, Wd	Medicinal (Antihelminthic, rheumatism, ulcers); Fuel; Timber	NE
<i>Pinus roxburghii</i> Sarg.	Cheer/ Cheel	T	1500- 1800	Reg Himal	Sd, Wd, Res	Medicinal (Boils, bone fracture, cracks in sole of feet, leprosy, skin diseases, snake bite, sprain, swelling, urine complaints); Edible; Fuel; Timber; Agricultural tools	NE
<i>P. wallichiana</i> Jack.	Kail	T	1500- 2300	Reg Himal	Wd	Fuel; Timber	NE
Pteridophytes							
Adiantaceae							
<i>Adiantum incisum</i> Forssk.	-	Fn	1500- 2100		Lf,	Medicinal (Cough, cold, fever, chest infection and skin diseases)	
Aspleniaceae							
<i>Asplenium dalhousiae</i> Hk.	-	Fn	1500- 2000		Rh	Medicinal (Typhoid)	-
Athyriaceae							
<i>Diplazium esculentum</i> (Retz.) Sw.	Lingdi	Fn	1600- 2300		Frd	Medicinal (Constipation); Edible	-
Cryptogrammaceae							
<i>Onychium contiguum</i> Wall. ex Hope	-	Fn	1500- 2300		Rh	Medicinal (Typhoid, fever)	-
Equisetaceae							
<i>Equisetum arvense</i> Roxb.	-	Fn	1800- 2300		WP	Medicinal (Diuretic, haemostat, Dyspepsia)	-
Pteridaceae							
<i>Pteris biaurita</i> L.	-	Fn	1500- 1900		Frd	Medicinal (Wounds)	-

Appendix: Diversity, distribution and utilization pattern of economically important plants in Tandri Nag

Botanical Name	Local Name	LF	AR (m)	Nativity	Part Used	Uses	End
Acanthaceae							
<i>Barlaria cristata</i> L.	-	H	1500- 2300	Ind Or Burma	WP	Medicinal (Anaemia, body pain, headache, swelling in legs, toothache); Edible	-
<i>Dicliptera roxburghiana</i> Nees	-	H	1700- 2300	Ind Or	WP	Medicinal (Tonic)	-
<i>Goldfussia dalhousiana</i> Nees	-	H	1500- 2100	Reg Himal	WP	Fodder	-
<i>Strobilanthes atropurpureus</i> Nees	-	H	1500- 2300	Reg Himal	AP	Fodder	E
Aceraceae							
<i>Acer cappadocicum</i> Gledt.	Mandru	T	1800- 2300	As min	Lf, St	Fodder; Agricultural tool; Fuel	-
Amaranthaceae							

<i>Achyranthes aspera</i> L.	Puthkanda/U Malkudi	H	1500-2000	As Trop	WP	Medicinal (Asthma, boils, bronchitis, cold, cough, dysentery, germicide, headache, laxative leucoderma, piles, pneumonia, rheumatism, scabies, skin diseases, sore, stomachache, tonic, toothache, whooping cough, wounds, veterinary diseases); Edible	-
<i>A. bidentata</i> Bl.	Puthkanda/U Malkudi	H	1500-2000	Reg Trop	WP	Medicinal (Blisters in mouth, cholera, scorpion sting, swelling, whooping cough)	-
Anacardiaceae							
<i>Cotinus coggygia</i> Scop.	Tung	Sh	1500-2000	Reg Medit Oriens Reg Himal China	Fr, Fl	Dye	-
<i>Toxidendron wallichii</i> (Hk.f.) Kuntze	-	T	1600-2000	Reg Himal China Ins Sandvic	Fr, Wd	Medicinal (Gastric problem, skin diseases); Edible; Fuel	-
Anacardiaceae							
<i>Arisaema intermedium</i> Bl	Kira aloo	H	1500-1900	Reg Himal	Tu	Medicinal (epilepsy, tetanus, cold and cough)	NE
<i>A. jacqueomontii</i> Bl	-	H	1800-2300	Reg Himal	RT, fl	Medicinal(antidote to snakr bite); edible	NE
Apiaceae							
<i>Chaerophyllum reflexum</i> Lindl.	Bhae	H	1500-2300	Reg Himal	Rt	Edible	-
<i>Hydrocotyle javanica</i> Thunb.	-	H	1700-1900	Java	Lf	Medicinal (Dysentery, indigestion, fever)	-
Araliaceae							
<i>Hedera nepalensis</i> K. Koch	-	H	1800-2300	Reg Himal Europe Afr Bor As Temp	Fr, Lf	Medicinal (Cold, cough, stimulant, diaphoretic, cathartic, rheumatism); Edible	-
Asteraceae							
<i>Ainsliaea aptera</i> DC.	Sathjilari	H	1800-2300	Reg Himal	Rt	Medicinal (Stomachache)	NE
<i>Anaphalis nepalensis</i> (Spreng.) Hand.-Mazz.	-	H	1500-1900	Reg Himal	Lf	Misc. (Lit the fire)	-
<i>A. triplinervis</i> (Sims.) Cl.	-	H	1800-2300	Reg Himal	WP, Lf	Medicinal (Diuretic); Misc.(Flint for making fire)	-
<i>Artemisia nilagarica</i> (Cl.) Pamp.	Jhaola	H	1500-1800	Reg Temp Bor	Lf, Rt, Sd	Medicinal (Abscess, analgesic, anthelmintic, antiseptic, asthma, ear complaints, epilepsy, febrifuge, headache, nervous disorders, skin diseases, sores, stomachache, tonic, wounds, insect repellent) ; Religious	-
<i>A. roxburghiana</i> Bess.	Jhaola	H	2000-2300	Reg Himal	Lf	Medicinal (Pimple, Sores)	NE

<i>Bidens pilosa</i> L.	-	H	1800-2300	Reg Trop	WP	Medicinal (Cough, cuts, ear and eye complaints, headache, inflammation, leprosy, skin diseases, snake bite, sores, wounds); Edible	-
<i>Blumea laciniata</i> (Roxb.) DC.	-	H	1500-2100	Ind Or Malaya China	WP	Medicinal (Blood purifier)	-
<i>Cirsium wallichii</i> DC.	Bhungsha	H	1500-2300	Reg Himal	WP	Medicinal (Cough, Swelling, headache, pneumonia)	NE
<i>Crassocephalum crepidioides</i> (Benth.) Moore	-	H	1500-1700	Afr Trop	Lf	Medicinal (Constipation, Stomachache, Headache)	-
<i>Erigeron bonariensis</i> L.	-	H	1500-2000	Am Austr	Lf	Medicinal (Rheumatism, mouth, throat and skin diseases)	-
<i>E. multiradiatus</i> (DC.) Cl.	-	H	2000-2300	Reg Himal	WP	Medicinal (Tonic, renal and stomach pain)	-
<i>Galinsoga parviflora</i> Cav.	-	H	1500-2000	Mexic North Am	Lf	Medicinal (Snake bite, Bleeding)	-
<i>Gerbera gossypina</i> (Royle) Beauv.	Kopar	H	1700-2100	Reg Himal	Rt	Medicinal (Blood pressure, gastric disorders); Religious	NE
<i>Gnaphalium thomsonii</i> D. Don	Dhoop	H	1500-2300	Reg Magell	AP	Religious	-
<i>G. hypoleucum</i> DC.	-	H	1500-1800	As Trop	WP	Medicinal (Cuts, wounds)	-
<i>Inula cappa</i> DC.	-	H	1500-1800	Reg Himal Java China	Lf	Medicinal (Headache, urinary complaints); Fodder	-
<i>Lactuca dissecta</i> D. Don	-	H	2000-2300	Reg Himal	Fl	Edible	-
<i>Myriactis nepalensis</i> Less.	-	H	1500-2100	Reg Himal As Centr	Lf	Edible	-
<i>Solidago virga-aurea</i> L.	-	H	1500-2300	Reg Bor Temp	WP	Medicinal (Anthelmintic, antifungal, anti-inflammatory, carminative, diuretic, febrifuge)	-
<i>Tagetes minuta</i> L.	Basala Ghaa	H	1500-2000	Am Trop	WP	Misc. (Aromatic oil)	-
<i>Taraxacum campylodes</i> G.E. Haglund	-	H	1700-2300	Am Trop	WP	Medicinal (Blisters, blood purifier, bowel complaints, diuretic, dysentery, gastric, ulcer, headache, kidney diseases, liver complaints, tonic, wounds); Edible	-
Balsaminaceae							
<i>Impatiens amphorata</i> Edgew.	-	H	2000-2300	Reg Himal	Sd, WP	Edible; Fodder	-
Berberidaceae							
<i>Berberis aristata</i> DC.	Kamushal	Sh	2000-2300	Ind Or	WP	Medicinal (Antidote to snake bite, malaria, piles); Edible; Fuel	NE
<i>B. lycium</i> Royle	Kamushal	Sh	1500-1900	Reg Himal	Rt, Fr	Medicinal (Jaundice, eye diseases); Edible; Fuel	NE
Boraginaceae							
<i>Cyanoglossum wallichii</i> G. Don.	-	H	1900-2300	Ind Or Burma	Rt	Medicinal (Dyspepsia, digestive disorders)	-

Buddlejaceae							
<i>Buddleja crispa</i> Benth.	-	Sh	1500-2000	Reg Himal Burma	Lf, Wd	Fodder; Fuel	NE
Cannabaceae							
<i>Cannabis sativa</i> L.	Bhang	H	1500-2000	As Center Reg Himal	Fl, Lf, Sd	Medicinal (Antihelminthic, appetite, bowel, bronchitis, cold, cough, convulsion, cramps, epilepsy cuts, dyspepsia, ear complaints, eye dysfunctions, gonorrhea, laxative, narcotic, stimulant, paralysis, piles, skin, eruption, sleep pills, sores, tetanus); Edible; Fiber	-
Caprifoliaceae							
<i>Lonicera quinquelocularis</i> Hardw.	-	Sh	1500-2300	Reg Himal	Lf, Wd	Fodder; Fuel	-
<i>Viburnum mullaha</i> Buch.-Ham. ex D. Don	-	Sh	1700-2200	Reg Himal	Fr, Lf, Wd	Edible; Fodder; Fuel	-
Caryophyllaceae							
<i>Cerastium cerastoides</i> (L.) Britton.	-	H	2100-2300	Reg Himal	WP	Medicinal (Cough)	-
<i>Stellaria media</i> (L.) Vill.	Badyala	H	1500-2300	Reg Temp	WP	Medicinal (Bone fracture); Edible	-
Celastraceae							
<i>Euonymus tingens</i> Wall.	-	T	1800-2300	Reg Himal	Bk, Lf	Medicinal (Eye diseases); Fodder; Dye	-
Chenopodiaceae							
<i>Chenopodium foliosum</i> Asch.	Bathu	H	1500-2300	Reg Bor et Austr	Lf	Edible	-
<i>Dysphania ambrosioides</i> (L.) Mosyakin & Clemants	-	H	1800-2300	Reg Temp et Trop	Lf	Medicinal (Anthelmintic, influenza, Pneumonia)	-
Convolvulaceae							
<i>Convolvulus arvensis</i> L.	-	H	1500-2300	Geront. temp	WP	Medicinal (Purgative, burns, bruises)	-
<i>C. oblongus</i> Wall.	-	Sh	1700-2000	Reg Himal	St	Fuel	-
Coriariaceae							
<i>Coriaria nepalensis</i> Wall.	-	Sh	1500-2300	Reg Himal China	St, Lf, Fr	Medicinal (Emetic); Edible; Agricultural tools	-
Crassulaceae							
<i>Rosularia rosulata</i> (Edgew.) H. Ohba	-	H	1500-2200	Reg Himal	Lf	Medicinal (Skin disease)	NE
Cyperaceae							
<i>Carex foliosa</i> D. Don	-	H	1500-2000	Reg Himal	WP	Fodder	NE
Dioscoreaceae							
<i>Dioscorea deltoidea</i> Wall. ex Kunth	Shingli-Mingli	H	2000-2300	Ind Or	Tu	Medicinal (Dysentery, piles); Edible	-
Elaeagnaceae							
<i>Elaeagnus conferta</i> Roxb.	Ghaiyeen	Sh	1550-2100	Ind Or	Fl, Fr	Medicinal (Sores, ulcer); Edible	NE
Ericaceae							
<i>Lyonia ovalifolia</i> (Wall.) Drude	-	T	1500-2300	Reg Himal Japan	WP	Medicinal (Boils, pimples, skin diseases, wormifuge, wounds); Fuel	-
Fabaceae							

<i>Cajanus scarabaeoides</i> (L.) Thouars	-	H	1500-1750	Austr	WP	Med (Child birth, night fever post natal, Smallpox, Sterility in female)	-
<i>Desmodium elegans</i> DC.	Safed kathi	Sh	1800-2300	Reg Himal China	AP, Rt, Wd	Medicinal (Epilepsy, carminative); Fodder; Fuel; Religious	-
<i>Indigofera heterantha</i> Wall. ex Brand.	Kaali kathi	Sh	1500-2300	Reg Himal	Lf, Wd	Medicinal (Veterinary diseases, urinary problems); Fodder; Fuel	-
<i>Trifolium repens</i> L.	Malori	H	1500-2300	Geront Bor Temp	WP	Medicinal (Dandruff)	-
<i>Vicia rigidula</i> Royle	-	H	1700-2300	Reg Himal	WP	Fodder	-
Fagaceae							
<i>Quercus leucotrichophora</i> Cam.	Baan	T	1500-2300	Reg Himal	Wd, Lf	Fodder; Fuel; Timber	-
Gentianaceae							
<i>Swertia cordata</i> (G. Don) Wall. ex Cl.	Charaita	H	2000-2400	Reg Himal	WP	Medicinal (Anthelmintic, antiperiodic, appetizer, laxative)	NE
Geraniaceae							
<i>Geranium nepalense</i> Sw.	-	H	1500-2300	Ind Or China	Rt	Medicinal (Cuts, jaundice, toothache, ulcer, wounds, stomach complaints); Dye	-
<i>G. wallichianum</i> D. Don ex Sw.	-	H	1900-2300	Reg Himal	WP	Fodder	NE
Haemodoraceae							
<i>Ophiopogon intermedius</i> D. Don	-	H	1500-2100	Ind Or	WP	Fodder	-
Hydrangeaceae							
<i>Deutzia staminea</i> R. Br.	-	Sh	1500-2300	Reg Himal	Lf, Wd	Fodder; Fuel	NE
<i>Philadelphus tomentosus</i> Wall. ex. Royle	-	Sh	1600-2300	Reg Himal	Lf	Fuel	-
Iridaceae							
<i>Iris decora</i> Wall.	Zora ghaa	H	2000-2300	Reg Himal	Lf	Fodder	NE
Juglandaceae							
<i>Juglans regia</i> L.	Khor	T	1500-1600	As Occ Reg Himal	Fr, Wd, Lf	Medicinal (toothache, Skin problems) Edible; Timber; Dye; Misc. (Insecticide)	NE
Lamiaceae							
<i>Ajuga integrifolia</i> Buch.-Ham.	Neelkanthi	H	1700-2300	Afr Trop Ind Or As Or	Lf	Medicinal (Ascariasis)	-
<i>A. parviflora</i> Benth.	Neelkanthi	H	2200-2300	Reg Himal	Lf	Medicinal (Febrifuge)	NE
<i>Clinopodium umbrosum</i> (M. Bieb.) Kuntze	-	H	1500-2300	Oriens Ind Or	WP	Medicinal (Astringent, carminative, heart tonic); Fodder	-
<i>Elsholtzia fruticosa</i> (Don) Rehd.	-	Sh	1500-2100	Reg Himal	Lf, Fr, Sd	Medicinal (Relieve sciatica); Edible	-
<i>Isodon coetsa</i> (Buch.-Ham. ex D. Don) Kudô	-	H	2000-2300	Reg Himal Burma	Lf	Medicinal (Gastric complaints)	-
<i>I. rugosus</i> (Wall. ex Benth.) Codd	-	Sh	1500-2300	Reg Himal	Lf	Medicinal (Fever, stomach pain, vermicide, insecticide); Misc. (Broom making)	-
<i>Nepeta ciliaris</i> Benth.	-	H	1800-	Reg Himal	Lf	Medicinal (Malarial fever)	NE

			2300				
<i>Origanum vulgare</i> L.	Ban tulsi	H	1600-2300	Europe As	WP	Medicinal (Cold, fever, hysteria, influenza, menstrual complaints, stimulant, tonic); Edible; Religious	-
<i>Phlomoides bracteosa</i> Royle ex Benth.	-	H	1500-2300	Reg Himal	Fl	Medicinal (Eye diseases)	NE
Lauraceae							
<i>Machilus duthiei</i> King	-	T	1800-2300	Reg Himal	Wd, Lf	Fuel; Fodder	NE
Liliaceae							
<i>Polygonatum cirrhifolium</i> (Wall.) Royle	Salam Mishri	H	1800-2300	Reg Himal As Bor	Tu	Medicinal (Aphrodisiac, blood purifier, cuts, wounds)	-
Linaceae							
<i>Reinwardtia indica</i> Dumort.	-	H	1500-2300	Ind Or	AP	Medicinal (Mouth sores); Fodder	NE
Malvaceae							
<i>Malva sylvestris</i> L.	-	H	1800-2300	Europe et Afr	WP	Medicinal (Cough, emollite, pectoral complaints, piles, ulcer, urine problems); Edible	-
<i>Malva verticillata</i> L.	-	H	1800-2300	Europe As et Afr Bor	Lf, Rt, Sd	Medicinal (Cough, pectoral complaints, piles, ulcer, urine complaints); Edible	-
Meliaceae							
<i>Toona ciliata</i> Roem.	Daral	T	1500-2100	Malaya Austr	Bk, Fr, Lf	Medicinal (Antiseptic, dysentery, bronchitis, fever, gastric troubles); Fodder	-
<i>T. sinensis</i> (Juss.) M. Roem.	Daran	T	1600-2300	Malaya Austr	St	Medicinal (Antiseptic, gastric troubles); Fodder; Fuel; Agricultural tools	-
Moraceae							
<i>Ficus palmata</i> Forsk.	Fagoo	T	1500-2000	Afr Trop Arab Ind Or	Fr, Lf, St	Fuel; Fodder; Edible	-
<i>F. sarmentosa</i> Ham. ex Sm.	-	Sh	1500-2300	Reg Himal	Fr, Lf	Edible; Fodder	-
<i>Morus serrata</i> Roxb.	Cheemu	T	1500-2300	Reg Himal	Fr, Lf	Edible; Fodder; Fuel	NE
Myrsinaceae							
<i>Myrsine africana</i> L.	-	Sh	1700-2300	Reg Himal Afr Austr et Trop Ins Azor	AP	Medicinal (Colic pain, vermifuge); Fodder	-
Oleaceae							
<i>Jasminum humile</i> L.	-	Sh	1500-2300	Reg Himal	Lf	Medicinal (Skin disease, blood disease, heart problems); Fodder; Religious	-
<i>J. officinale</i> L.	-	Sh	2000-2300	Ind Bor Occ China	Fl, Lf, Rt	Medicinal (Ringworm); Fodder; Religious	-
Orchidaceae							
<i>Epipactis helleborine</i> (L.) Crantz	-	H	2200-2300	Reg Himal	Lf, Rh	Medicinal (Fever, aphrodisiac)	-
<i>Habenaria intermedia</i> D.Don	-	H	1500-2300	Reg Himal	Lf, Rt	Medicinal (Tonic, fever, skin diseases and blood	E

						disorder)	
Oxalidaceae							
<i>Oxalis corniculata</i> L.	Malori	H	1500-2100	Amphig Temp et Trop	WP	Medicinal (Appetizer, cooling, cough, cuts, dysentery, epilepsy, eye complaints, fever, jaundice, scurvy, skin diseases, stomachache, swelling); Edible	-
Poaceae							
<i>Arundinella nepalensis</i> Trin.	-	H	1500-2000	Ind Or	WP	Medicinal (Ointment)	-
<i>A. pumila</i> Steud.	-	H	1500-2000	Abyss	WP	Fodder	-
<i>Drepanostachyum falcatum</i> (Nees) Keng f	Rigal	Sh	1500-1900	Reg Himal	St	Fodder; Fuel; Misc. (Baskets, mats, hats)	-
<i>Oplismenus latifolius</i> Haenke ex Steud.	-	H	2000-2300	Cosmop Trop	WP	Fodder	-
<i>Saccharum spontaneum</i> L.	-	H	1800-2300	Geront Trop	Lf	Medicinal (Asthma, cholera); Fodder	-
<i>Sporobolus diandrus</i> (Retz.) Beauv.	-	H	1500-1800	As et Austral Trop	WP	Fodder	
<i>Themeda anathera</i> (Nees ex Steud.) Hack.	-	H	1500-1800	Ind Or	WP	Fodder	NE
Polygonaceae							
<i>Persicaria amplexicaulis</i> (D.Don) Ronse Decr.	-	H	2100-2300	Nepal Afg Ind Bhutan China	Lf, Rt	Medicinal (Cough, dysentery, tonic); Fodder	-
<i>P. hydropiper</i> L.	-	H	1600-2300	Reg Temp. Bor et Austr	Infl, Lf	Medicinal (Ringworm, skin disease)	-
<i>P. nepalensis</i> Meissn.	-	H	1500-2300	Reg Himal	Lf	Medicinal (Swelling); Fodder; Edible	-
<i>Rumex hastatus</i> D. Don	-	H	2000-2300	Reg Himal	Lf	Edible	-
<i>R. nepalensis</i> Spr.	Malora	H	1800-2300	As Occ Ind Or Malaya Afr Austr	Lf, Rt	Medicinal (Boils, colic, cooling, diuretic, purgative, scurvy, swelling of muscles); Fodder	-
Primulaceae							
<i>Androsace rotundifolia</i> Hardw.	-	H	2000-2300	Reg Himal China	Lf	Medicinal (To control menstrual flow and conception)	NE
<i>Lysimachia lobelioides</i> Wall.	-	H	1500-2200	Reg Himal Java	Lf	Medicinal (Snake bite)	-
Ranunculaceae							
<i>Clematis acuminata</i> DC.	-	Sh	1500-2300	Reg Himal	AP	Medicinal (Rheumatism, headaches, syphilis, gout, bone disorder, skin diseases)	NE
<i>C. buchananiana</i> DC.	-	Sh	1500-2100	Reg Himal	Lf, Rt	Medicinal (Skin diseases, sores, tumors)	-
<i>Delphinium denuatum</i> ex Hk. F. & Thomson	-	H	1800-2400	Reg Himal	Lf, Rt	Medicinal (toothache, antidote to snake bite)	NE
<i>Ranunculus diffusus</i> DC.	-	H	1500-2300	Ind Or Malaya	WP	Medicinal (Boils)	-
<i>Thalictrum foliolosum</i> DC.	Mamiri	H	1500-2300	Reg Himal	Rt	Medicinal (Abdominal pain, blood purifier, eye	NE

						diseases, leucoderma, rheumatism); Fodder	
Rhamnaceae							
<i>Rhamnus triqueter</i> Wall.	-	Sh	1600-2300	Reg Himal	Bk, Fr	Medicinal (Blood pressure, boils, scabies, skin diseases, tonic)	NE
<i>R. virgatus</i> Roxb.	-	Sh	1500-2100	Ind Or Bor	Fr, Lf, Wd	Medicinal (Emetic, purgative, infection of spleen); Fodder, Fuel	-
Rosaceae							
<i>Agrimonia pilosa</i> Ledeb.	-	H	1500-2200	Reg Bor Temp	AP, Rt	Medicinal (Cough, urinary problems)	-
<i>Fragaria nubicola</i> L.	-	H	1500-2300	Reg Temp	Fr	Edible	-
<i>F. vesca</i> L.	-	H	1600-2300	Reg Temp	Fr	Edible	NE
<i>Prinsepia utilis</i> Royle	Bhekhal	Sh	1500-2300	Reg Himal	Sd, Fr	Medicinal (Burns, cuts, rheumatism, wounds); Edible	-
<i>Prunus cerasoides</i> Don	Paja	T	1500-1800	Reg Himal	Lf, Fr	Fodder; Edible; Fuel; Religious	-
<i>P. cornuta</i> (Wall. ex Royle) Steud.	Jammu	T	1500-2300	Europe As Bor	Lf, Wd	Fodder; Fuel	-
<i>Pyrus pashia</i> Buch.-Ham. ex Don	Shegal	T	1500-2300	Reg Himal	Lf, Fr, Wd	Edible; Fodder; Fuel	-
<i>Rosa brunonii</i> Lindl.	Kunjaphool	Sh	1500-2300	Oriens	Rt, Wd, Fr, Lf	Medicinal (Diarrhoea, wounds, ophthalmia, pain); Fuel; Fodder; Edible	-
<i>Rubus biflorus</i> Buch.-Ham. ex Sm.	Aache	Sh	1700-2100	Reg Himal	Fr, Rt	Medicinal (Diarrhoea); Edible	-
<i>R. ellipticus</i> Don	Aache	Sh	1500-1900	Ind Or	Fr, Rt	Medicinal (Dysentery, malaria, stomachache, worms); Edible	-
<i>Sorbaria tomentosa</i> (Lindl.) Rehder	-	Sh	1500-2300	Reg Himal As Bor	Wd	Fuel	-
<i>Spiraea canescens</i> D. Don	Chaku	Sh	2000-2300	Reg Himal	AP	Fodder	NE
Rubiaceae							
<i>Galium aparine</i> L.	-	H	1500-2300	Reg Bor Temp et Magell	WP	Medicinal (Astringent, skin diseases)	-
<i>G. rotundifolium</i> L.	-	H	1500-2000	Europe As Temp	AP	Medicinal (Bronchitis, tonsils); Fodder	-
<i>Rubia cordifolia</i> L.	-	H	1900-2300	As Trop et Temp Afr Trop	R, St	Medicinal (Tonic, astringent, antidote, dysentery)	-
Rutaceae							
<i>Boenninghausenia albiflora</i> (Hk.) Reichb.	-	H	1700-2000	Reg Himal Japan	Rt	Medicinal (Antiseptic, wounds); Misc. (Insecticide)	-
Salicaceae							
<i>Populus ciliata</i> Wall. ex Royle	Chloona	T	1900-2300	Reg Himal	Wd	Fuel	-
Sambucaceae							
<i>Viburunum mullah</i> Buch.- Ham. Ex D. Don	-	Sh	2000-2300	Amer	Lf, Wd, Fr	Fodder, Fuel, Edible	
Saxifragaceae							
<i>Bergenia ciliata</i> (Hew.) Stercb.	Pashan bhed	H	1700-2300	Reg Himal	Rt, Lf	Medicinal (Asthma, boils, cuts, wounds, burns, fever,	NE

						liver complaints, ophthalmia, piles, thirst, kidney stones, urine complaints, diarrhoea of cattle); Edible	
Scrophulariaceae							
<i>Scrophularia himalensis</i> Royle ex Benth.	-	H	1900-2300	Reg Himal	Lf	Misc. (Insecticide)	E
<i>Verbascum thapsus</i> L.	Ban Tambacoo	H	1500-2300	Europe Afr Reg Himal	Sd	Medicinal (Asthma, cough, inflammation, leucoderma, veterinary diseases)	-
<i>Veronica biloba</i> L.	-	H	1500-2300	Reg Himal et Cauc Sibir	AP	Fodder	-
Solanaceae							
<i>Solanum indicum</i> L.	-	H	1500-2200	Reg Trop	Fr	Medicinal (Asthma, fever, colic)	-
<i>S. americanum</i> Mill.	Makoy	H	1900-2100	Amphig	Fr, Lf, Fl, Sd	Medicinal (Antidote, boils, cough, dysentery, ear complaints, fever, eye complaints, skin diseases, urinary complaints)	-
Thymelaeaceae							
<i>Daphne papyracea</i> Wall. ex Stued.	Gandhri	Sh	1700-2100	Reg Himal	Rt, Lf	Medicinal (Intestinal complaints); Fodder; Fibre	NE
Urticaceae							
<i>Debregeasia longifolia</i> (N. Burman) Wedd.	-	Sh	1500-1700	Ind Or	Bk, Lf	Fodder; Fibre; Fuel	-
<i>Girardinia diversifolia</i> (Forsk.) Gaud.	Karal	H	1900-2300	Ind Or Malaya	Bk, St	Fibre	-
<i>Parietaria debilis</i> Frost.	-	H	1500-2000	Reg Trop et Sub Trop	Rt	Medicinal (Dandruff, hair problems)	-
<i>Pilea scripta</i> (Buch.-Ham. ex Don) Wedd.	-	H	1500-2300	Reg Himal	AP	Fodder	-
<i>P. umbrosa</i> Wedd.	-	H	1500-2300	Reg Himal	Lf	Medicinal (Wounds)	-
<i>Pouzolzia hirta</i> (Bl.) Hassk.	-	H	1800-2300	As et Austral Trop	Rt	Medicinal (Hair tonic)	-
<i>Urtica dioica</i> L.	Kungsh	H	1500-1900	Reg Bor Temp	Lf	Medicinal (Gout); Edible	-
Valerianaceae							
<i>Valeriana hardwickii</i> Wall.	Nihanu	H	1600-2300	Reg Himal Malaya	WP	Medicinal (Skin diseases)	-
<i>V. jatamansi</i> Jones	Mushkbala	H	1900-2300	Reg Himal	WP	Medicinal (Antidote to sting of insects, hysteria, neurosis, skin diseases); Religious	-
Violaceae							
<i>Viola canescens</i> Wall.	Banafsha	H	1500-2300	Ind Or Malaya China	Lf, Fl	Medicinal (Asthma, bronchitis, cold, cough, eye diseases)	NE
<i>V. pilosa</i> Bl.	Banafsha	H	5100-2100	Ind Or Malaya China	Lf, Fl	Medicinal (Asthma, bronchitis, cold, cough, wounds)	-
Vitaceae							
<i>Parthenocissus semicordata</i> (Wall.) Planch.	Karmai	Sh	1600-2300	Ind Or	Fr, Lf	Edible; Fodder	NE
Zingiberaceae							

<i>Hedychium spicatum</i> Buch.-Ham. ex Sm.	Ban Haldi	H	1500-2300	Reg Himal	Rh, Lf	Medicinal (Asthma, blood purifier, bronchitis, nausea); Fodder; Misc. (Mats)	NE
Gymnosperms							
Pinaceae							
<i>Cedrus deodara</i> (Royle ex D. Don) G. Don	Deodar/Devdar	T	1800-2300	Reg Himal	Res, Lf, Wd	Medicinal (Antihelminthic, rheumatism, ulcers); Fuel; Timber	NE
<i>Pinus roxburghii</i> Sarg.	Cheer/Cheel	T	1500-1800	Reg Himal	Sd, Wd, Res	Medicinal (Boils, bone fracture, cracks in sole of feet, leprosy, skin diseases, snake bite, sprain, swelling, urine complaints); Edible; Fuel; Timber; Agricultural tools	NE
<i>P. wallichiana</i> Jack.	Kail	T	1500-2300	Reg Himal	Wd	Fuel; Timber	NE
Pteridophytes							
Adiantaceae							
<i>Adiantum incisum</i> Forssk.	-	Fn	1500-2100		Lf,	Medicinal (Cough, cold, fever, chest infection and skin diseases)	
Aspleniaceae							
<i>Asplenium dalhousiae</i> Hk.	-	Fn	1500-2000		Rh	Medicinal (Typhoid)	-
Athyriaceae							
<i>Diplazium esculentum</i> (Retz.) Sw.	Lingdi	Fn	1600-2300		Frd	Medicinal (Constipation); Edible	-
Cryptogrammeae							
<i>Onychium contiguum</i> Wall. ex Hope	-	Fn	1500-2300		Rh	Medicinal (Typhoid, fever)	-
Equisetaceae							
<i>Equisetum arvense</i> Roxb.	-	Fn	1800-2300		WP	Medicinal (Diuretic, haemostat, Dyspepsia)	-
Pteridaceae							
<i>Pteris biaurita</i> L.	-	Fn	1500-1900		Frd	Medicinal (Wounds)	-

Abbreviations used: AR=Altitudinal range; H=Habit; 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; Frb= fruiting body and La=Latex; E=Endemic; NE=Near Endemic; Abyss=Abyssinia; Afghan=Afghanistan; Afr=Africa; Alger=Algeria; Am=America; Amphig=Amphigaea; Arab=Arabia; Arct=Arctic; As=Asia; Austr=Australia; Bor=Borealis; Caucas=Caucasus; Centr=Central; Cosmop=Cosmopolitan; et=And; Geront=Gerontia; Himal=Himalayan; Hisp=Hispan; Ind=Indian; Ins=Insular; Min=Minor; Madag=Madagascar; Occ=Occidentalis; Or=Oriental; Polynes=Polynesia; Pacif=Pacific; Reg=Region; Subtrop=Subtropical; Temp=Temperate and Trop=Tropical