

# DETAIL OF SPECIES CONSERVED

(As on 31.03.2024)



*Catamixis baccharoides*



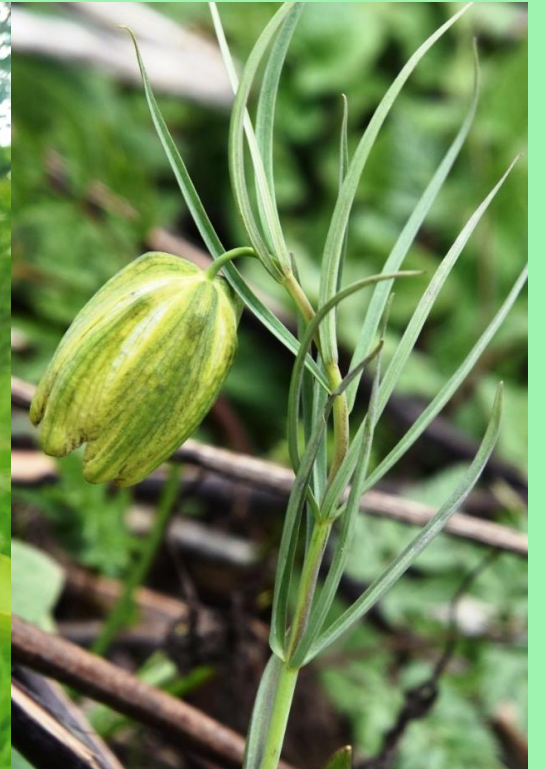
*Dactylorhiza hatagirea*



*Pittosporum eriocarpum*



*Meizotropis pellita*



*Fritillaria Roylei*



**Research Wing, Forest  
Department, Uttarakhand**



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# INTRODUCTION

Our lives depend on plants and without them, the ecosystem would cease to function. Our survival and survival of all species is tied to plants. The Research Wing of Uttarakhand Forest department strives to check the rate of plant diversity loss, while having a positive vision to have a sustainable future where plant species are able to thrive and be maintained (including preservation of their communities and habitats, plants' gene pool and ecological associations), and, which in turn improves diversity of plant species and supports the livelihoods and well being of humankind.

## MISSION

**Our mission is to discover and share knowledge about plants and their environment in order to preserve and enrich life.** Plant diversity, the world's greatest renewable natural resource, is being lost at an alarming rate, and we must act with the greatest urgency to document and conserve it before it is too late. The Research Wing of Uttarakhand Forest Department has recognized and accepted its responsibility to stem the loss of biodiversity and cultural diversity, actively conserve rare and endangered plants, apply adaptive management approaches to natural area conservation, preserve regional diversity and be an effective leader, mentor, and practitioner of environmental protection at home and throughout the state

## GOALS

The core of our conservation programme, for the State of Uttarkhand, is five goals, expressed as a total of 15 targets. The five objectives and their 15 targets for 2025 are

**Objective I:** Plant diversity is well understood, documented and recognized

Target 1: An online flora of all known plants.

Target 2: An assessment of the conservation status of all known plant species, as far as possible, to guide conservation action.

Target 3: Information, research and associated outputs, and methods necessary to implement the Strategy developed and shared.

**Objective II:** Plant diversity is urgently and effectively conserved

Target 4: A reasonable portion of each ecological region or vegetation type secured through effective management and/or restoration.

Target 5: An appropriate part of the most important areas for plant diversity of each ecological region, is protected with effective management in place for conserving plants and their genetic diversity.

Target 6: An appropriate part of known threatened plant species conserved in situ.

Target 7: A significant part of threatened plant species grow in ex situ collections, preferably near areas of origin, and a portion of it is available for recovery and restoration programmes.

Target 8: Genetic diversity of wild relatives of crops and other socio economically valuable plant species is conserved, while associated indigenous and local knowledge is respected, preserved and maintained.

Target 9: Effective management plans in place to prevent new biological invasions and to manage important areas for plant diversity that are invaded.

**Objective III:** Plant diversity is used in a sustainable and equitable manner

Target 10: No species of wild flora endangered by illegal trade.

Target 11: All wild harvested plant based products are sourced sustainably.

Target 12: Indigenous and local knowledge innovations and practices associated with plant resources maintained or increased, as appropriate, to support customary use, sustainable livelihoods, local food security and health care.

**Objective IV:** Education and awareness about plant diversity, its role in sustainable livelihoods and importance to all life on earth is promoted

Target 13: The importance of plant diversity and the need for its conservation incorporated into communication, education and public awareness programmes.

**Objective V:** To develop the capacities and public engagement necessary to implement the strategy.

Target 14: The number of trained people working with appropriate facilities sufficient according to needs of State, to achieve the targets of this Strategy.

Target 15: Institutions, networks and partnerships for plant conservation established or strengthened at national, regional and international levels to achieve the targets of this Strategy.

## PLANT BLINDNESS

This term was coined in 1998 by Elisabeth Schussler and James Wandersee, a pair of US botanists and biology educators. They described it as “the inability to see or notice the plants in one’s own environment”.

Plant blindness, results in an under appreciation of plants – and in a **limited interest in plant conservation**. Plant conservation not only matters for environmental health but also, for human health, in the long run.

Plant research is critical to many **scientific breakthroughs**, from hardier food crops to more effective medicines. **More than 28,000 plant species** are used medicinally, including plant derived anti cancer drugs and blood thinners.

Experimenting on plants also offers an ethical advantage over some forms of animal testing: versatile techniques in areas like genome editing can be refined using plants, which are easy and inexpensive to breed and control. For instance, the genome sequencing of Arabidopsis, a flowering plant important in biology research, was a landmark not only in plant genetics, but **in genome sequencing in general**.

In human societies, there is also a constant reinforcement of the idea that animals are fundamentally more interesting and visible than plants. We name animals and assign them human characteristics. We often use animals as sport team mascots and we’re attuned to individual variation among animals: the personality of a dog, say, or the unique colour pattern of a butterfly.

Even within animal conservation, certain charismatic animals (particularly large mammals with **forward facing eyes**) receive the lion’s share of attention. Indeed, Williams’ research has shown that people are more supportive of conservation efforts for species **with human like characteristics**.

Increased urbanisation and time spent with devices means that Plant blindness is on the rise. As Schussler has explained, “**humans can only recognise (visually) what they already know**”.

The challenge is magnified for plants. For example, in 2011 plants made up 57% of the federal endangered species list in the US, but they received **less than 4%** of federal endangered species funding.

One key to reduce plant blindness is to increase the frequency and variety of ways we see plants. This should start early. It is important to get children involved with plants early, such as on nature walks.

Everyday interactions with plants is the best strategy.

Plants could also be emphasised more in art. Visuals and stories are important for getting students to connect with plants and to start asking questions about plants' experiences, such as how plants get old.

In India, the human plant link is more about religion and medicine. Plants are deeply intertwined in so many aspects of Indian cultural life.

From mythological perspectives, trees, leaves and flowers would all be significant, but from medicinal perspectives in Ayurveda, many other parts of the plants have value – leaves, roots, flowers and seeds.

### **BIODIVERSITY IN UTTARAKHAND**

Uttarakhand being a part of Indian Himalayan Region (IHR) is home to vast variety and unique range of floral and faunal diversity of India as the State is uniquely endowed with diverse assemblage of natural ecosystems. According to scientific studies, the diversity under 1503 genera and 2133 families of flowering plants, including 93 endemic species is harboured in various vegetation types, ranging from sub tropical forests in upper Gangetic plain and Shiwaliks zone in the south to arctic alpine vegetation of trans Himalayan cold desert in the north in Uttarkhand.

## SUMMARY OF SPECIES CONSERVED

Research wing of Uttarakhand Forest Department has conserved total 2147 species through in situ and ex situ conservation measures.

Out of these, 2051 species have been identified and 96 are yet to be identified.

A total of 12 species among these are critically endangered, 25 species are endangered; 14 species are vulnerable and 14 are near threatened as per IUCN categorization; while 1 species is endangered, 3 species are vulnerable, and 5 species are rare as per ENVIS; and 5 are critically endangered, 7 are endangered, 5 are vulnerable as per BSI; 13 species are threatened as per Uttarakhand Biodiversity Board list and 1 species is critically endangered, 1 species are endangered, 1 species are vulnerable and 2 species are rare as per Indian Biodiversity Portal.

Further, out of 2147 total conserved species, 57 species are endemic, of which 25 are near endemic, 7 species are endemic to Uttarakhand, and 15 are endemic to Indian Himalayan Region and 12 species are endemic to India.

A total of 587 species conserved, have medicinal properties.

- **Tree species:** Total number of tree species conserved is 493 out of which 465 have been identified and 28 are yet to be identified. There are 107 Ficus species out of which 81 have been identified and 26 are yet to be identified; 8 Oak species; 23 Pine species; 7 Rhododendron species, and 348 other tree species. Out of these, 2 is critically endangered, 5 are endangered, 8 are vulnerable and 7 are near threatened species as per IUCN categorization; 2 species are threatened as per Uttarakhand Biodiversity Board; 3 are endangered as per BSI; 1 species is endangered, 1 is vulnerable, 3 are rare as per ENVIS and 1 is critically endangered, 1 is endangered and 1 is vulnerable as per Indian Biodiversity Portal. Out of the total tree species, 27 species are endemic/ near endemic to Uttarakhand, and 215 species have medicinal properties.
- **Herb species:** Total number of herb species conserved is 184. A total of 5 species are critically endangered, 4 species are endangered, 1 is Vulnerable as per IUCN categorization; 5 species are threatened as per Uttarakhand Biodiversity Board; 5 species are critically endangered, 2 are endangered as per BSI; 2 are vulnerable, as per ENVIS and 1 is rare and 1 is vulnerable as per Indian Biodiversity Portal. Out of the total herb species conserved 9 species are endemic/near endemic to Uttarakhand and 8 are endemic to Indian Himalayan Region and 139 have medicinal properties. Out of total species, 73 are aromatic species.




- **Shrub species:** Total number of shrub species conserved is 168. A total of 3 species are endangered as per IUCN; 1 species is threatened as per Uttarakhand Biodiversity Board and 1 is vulnerable as per Indian Biodiversity Portal. Out of the total shrub species conserved, 12 species are endemic and 103 have medicinal properties. Out of total 168 species, 19 are Tulsi species and 26 are other aromatic species.
- **Bamboo species:** Total number of bamboo species conserved is 46. Out of these, 2 species are endemic to India and 3 species have medicinal properties.
- **Wild climbers:** Total number of wild climber species conserved is 86. A total of 85 species have been identified and 1 species is yet to be identified. Out of the total wild climbers conserved, 57 species have medicinal properties.
- **Cane species:** Total number of cane species conserved is 12. Out of these, 1 species is critically endangered, and 1 is vulnerable species as per IUCN categorization.
- **Grass species:** Total number of grass species conserved is 107 out of which 94 species have been identified and 13 are yet to be identified. A total number of 15 species have medicinal properties.
- **Fern species:** Total number of fern species conserved is 191 out of which 171 species have been identified and 20 are yet to be identified. 1 species is threatened as per Uttarakhand Biodiversity Board. Out of the total fern species, 1 is pan endemic and 25 species have medicinal properties.
- **Orchid species:** Total number of orchid species conserved is 114. Out of these, 46 species come under Appendix II of CITES, 1 species is critically endangered, 1 species is vulnerable as per IUCN categorization, 3 are threatened as per State Biodiversity Board and 1 species is vulnerable, 1 is rare as per ENVIS and 1 is vulnerable and 2 are rare as per Indian Biodiversity Portal. Out of the total orchid species conserved, 2 species are endemic and 21 have medicinal properties.
- **Alpine flowers:** Total number of Alpine flower species conserved is 14. Out of these, 1 species comes under Appendix II of CITES. Out of these, 1 species is endangered as per IUCN categorization, while 1 species is rare as per ENVIS and 2 species are critically endangered, 4 species are endangered according to various research papers. Out of total alpine flower species, 8 species have medicinal properties.
- **Wild flowers:** Total number of wild flower species conserved is 40. Out of this, 1 species is extinct in wild, as per IUCN categorization. Out of the total conserved wild flower species, 12 species have medicinal properties.
- **Palm species:** Total number of palm species conserved is 88. A total number of 4 species are critically endangered, 2 species are endangered, 3 species are vulnerable and 7 species are near threatened as per IUCN categorization, while 1 is rare as per ENVIS, 1 is threatened as per Uttarakhand Biodiversity Board and 1 is rare as per Indian Biodiversity Portal. Out of the total palm species, 1 is endemic to Uttarakhand.
- **Cycad species:** There are 20 species of Cycad. A total of 18 species have been identified and 2 is yet to be identified. A total number of 1 species is critically endangered, 4 species are endangered, 1 species is vulnerable and 1 is near threatened species as per IUCN categorization.







- **Cactus and succulent species:** Total number of cactus and succulent species conserved is 285. There are 149 succulent species out of which 139 have been identified and 10 are yet to be identified, and there are total 136 cactus species out of which 127 species have been identified and 9 are yet to be identified. Out of this, 1 cactus species is endangered as per IUCN categorization and 1 is endemic.
- **Aquatic species:** Total number of aquatic species conserved is 50. A total of 48 species have been identified and 2 species is yet to be identified and 4 species have medicinal properties.
- **Insectivorous species:** Total number of insectivorous species conserved is 28. Out of the total insectivorous species, 3 species are endemic to the Indian Himalayan Region and 1 has medicinal properties.
- **Lichen species:** Total number of lichen species conserved is 85. Out of these, 1 species has medicinal properties.
- **Bryophyte species:** Total number of moss species conserved is 74, liverwort species are 31 and hornwort species are 2.
- **Other species:** Total number of air plant species being conserved is 15 and 14 algae species have also been conserved.






I. **Tree Species** Tree Species being conserved across all the research Ranges with the prominent areas are at Arboratum (Haldwani & Jeolikot), Ficus Garden (Lalkuan), Pinatum (Kalika), Oak Conservation Area (Kalika) and Rododendron Demonstration Area (Munsyari).







**I.Ficus:**




S. No	Family; Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS /Uttarakhand Govt./ Indian Biodiversity Portal)	Nursery												Experiment Site	Preservation Plot	Grand Total	Use	Native Region	
				Nursery Name																	Total
				1		2		3		4		5		6							
				Nursery. Name	No. Of Plant	Nursery . Name	No. Of Plant	Nursery. Name	No. Of Plant	Nurser y. Name	No. Of Plant	Nurser y.Name	No. Of Plant	Nurser y. Name	No. Of Plant						
1.	<b>Moraceae ;</b> <i>Ficus rumphii</i> Blume	 Pilkhan		Gaja	255										255	5(Trishula comp. 1 K.W.L.D); 1(Arboretum at Gaja); 1( Ficus Garden, Lalkuan); 20 ( Riparian plot)	283	Fodder	India, Bhutan, Myanmar and Nepal.		
2.	<b>Moraceae ;</b> <i>Ficus religiosa</i> L.	 Peepal		Mandal	40	Kalsi	78	Lalkuan	7	Kalsi	78	Shya mpur	100		203	25(Trishula comp. 1 K.W.L.D) 1(Arboretum at Gaja); 1 (Nav GrahaVaatika)/ 2 (SarvDharmVaatika )/ 1 (Panchvati); 1( Ficus Garden, Lalkuan)/ 1 (Buddha vaatika);20 ( Riparian plot)	323	Medicinal	SE Asia, Southwest China, India and Himalayan foothills.		
3.	<b>Moraceae;</b> <i>Ficus auriculata</i> Lour.	 Timla		Mandal	330	Tangsa	50	Kalsi	451	Gaja	155	Kalika	261	Dwa rson	296	4166	371 (Trishula comp. 1 K.W.L.D) ; 1(Ficus Garden, Lalkuan) 32 plants (Miyawaki Experiment); 1(Arboretum at Gaja); 52(Ficus Garden, Lalkuan)	4623	Edible and Fodder	India (Outer Himalaya), Pakistan, S. China, Myanmar and Thailand.	



4.	<b>Moraceae ;</b> <i>Ficus neriifolia</i> J.E. Sm.	 Dudhla		Kalsi	38										38	7(Trishula comp. 1 K.W.L.D) 7(Ficus Garden, Lalkuan)		46	Fodder	Near Endemic.	
5.	<b>Moraceae;</b> <i>Ficus palmata</i> Forssk.	 Bedu		Mandal	450	Kalika	501	Dwars on	77	Kalsi	25	Gaja	253	Saria taal	1198	2504	190(Trishula comp. 1 K.W.L.D); 6(Ficus Garden, Lalkuan)		2700	Edible, Fodder and Medicinal	Uttarakhand in Mid Himalayan region. Pakistan and Nepal.
5A	<b>Moraceae;</b> <i>Ficus palmata</i> (Local)	 Punjab Fig															56 plants (Miyawaki Experiment); 1 (Arboretum at Gaja); 8 (Miyawaki); 7 (Ficus garden, Lalkuan)		72	Edible and Medicinal	Commonly found in Uttarakhand in Mid himalayan region.
5B	<b>Moraceae;</b> <i>Ficus palmata</i> (Doiwalal)	 Punjab Fig															11 (Ficus Garden, Lalkuan)		11	Edible and Medicinal	Native to India
6.	<b>Moraceae;</b> <i>Ficus hispida</i> L.F.	 Titmila	Least concern (as per IUCN)	Gaja	107												77 (Trishula comp. 1 (K.W.L.D) ; 1(Arboretum at Gaja); 8(Ficus Garden, Lalkuan)		194	Fodder	India, Pakistan, Sri Lanka and Bhutan.

7.	<b>Moraceae;</b> <i>Ficus cunia</i> Buch. ham ex Roxb.	 Khaina		Mandal	20	Gaja	32	Lalkuan	81						133	29(Trishula comp. 1 K.W.L.D ); 1(Arboretum at Gaja); 24(Ficus Garden, Lalkuan)		188	Fodder	Nepal to S.China and Malaysia.
8.	<b>Moraceae;</b> <i>Ficus clavata</i> Wall. ex Miq	 Chachari		Mandal	90	Gaja	120								210	71(Trishula comp. 1 K.W.L.D ); 1(Arboretum at Gaja); 21(Ficus Garden, Lalkuan)		303	Fodder	India, Nepal, China and Myanmar.
9.	<b>Moraceae;</b> <i>Ficus virens</i> Aiton	 Pakhar														24(Trishula comp. 1 K.W.L.D ); 1(Ficus Garden, Lalkuan)		26	Fodder	Southwest Asia.
10	<b>Moraceae;</b> <i>Ficus benghalensis</i> L.	 Bargad		Gaja	23	Lalkuan	5								28	1(Trishula comp. 1 K.W.L.D ); 1(Arboretum at Gaja); 1 (Nakshtra Vaatika) 3 (SarvDharm Vaatika); 1 (Ficus Garden, Lalkuan)/1 (Buddha vaatika); 20( Riparian Plot); 10 (Public Health Garden)		57	Religious and Medicinal	Indian Subcontinent.
11.	<b>Moraceae;</b> <i>Ficus benghalensis</i> var. variegated															1(Ficus Garden, Lalkuan)		1	Medicinal	

12.	<b>Moraceae;</b> <i>Ficus benghalensis</i> <i>var. krishnae</i> (C. DC.) Syn . <i>Ficus krishnae</i> C. DC.Bull.	 Indian banyan	Lalkuan	8										8	1(Arboretum at Gaja); 1 (Arboretum); 1(Sarv Dharmvaatika) 3 (Ficus Garden, Lalkuan)	14	Medicinal	India, Malaysia and Sri Lanka.
13.	<b>Moraceae;</b> <i>Ficus gibbosa</i> Blume	 Chachhari	Kalsi	8										8	1(Ficus Garden, Lalkuan)	9	Fodder and Medicinal	India, Nepal, Myanmar, Sri Lanka and Vietnam.
14.	<b>Moraceae;</b> <i>Ficus tinctoria</i> G. subsp. <i>gibbosa</i> Blume	 Dye Fig													1(Ficus Garden, Lalkuan);	1		India, Nepal, Myanmar, Sri Lanka and Vietnam.
15.	<b>Moraceae;</b> <i>Ficus infectoria</i> Willd.	 Pakhad	Gaja	341										341	2(Arboretum at Gaja); 1 (Nakshtra Vaatika); 5(Ficus Garden, Lalkuan)	349	Fodder	India, (Central, Western and Southern regions) Sri Lanka and Myanmar.
16.	<b>Moraceae;</b> <i>Ficus infectoria</i> Roxb. var. <i>caulocarpa</i> (Miq) King	 White Fig													1(Ficus Garden, Lalkuan)	1	Edible, Medicinal and Fuelwood	India, Japan, Sri Lanka and Myanmar.







17.	<b>Moraceae;</b> <i>Ficus racemosa</i> L.	 Gular														1(Arboretum at Gaja); 1 (Nav Graha Vaatika) 1 (Nakshtra Vaatika) 17 (Miyawaki)	20	Fodder	India, Nepal, Pakistan, Myanmar and China.
18.	<b>Moraceae;</b> <i>Ficus carica</i> L.	 Anjir	Least concern (IUCN)	Lalkuan	50											1(Arboretum at Gaja); 1 (Sarv Dharm Vaatika); 4(Ficus Garden, Lalkuan); 5 (Public Health Garden)	61	Edible and fruit	India, West Asia, Turkey to Afghanistan.
19.	<b>Moraceae;</b> <i>Ficus carica</i>	 Common fig														2(Ficus Garden, Lalkuan)	2	Edible and Medicinal	India, West Asia, Turkey to Afghanistan.
20.	<b>Moraceae;</b> <i>Ficus carica</i>	 Common fig														1(Ficus Garden, Lalkuan)	1	Edible and Medicinal	India, West Asia, Turkey to Afghanistan.
21.	<b>Moraceae;</b> <i>Ficus lyrata</i> Warb.	 Fiddle leaf fig														4(Arboretum at Gaja); 2(Ficus Garden, Lalkuan)	6	Rubber	Native to Western Africa.
22.	<b>Moraceae;</b> <i>Ficus nervosa</i> B.Heyne ex Roth	 Nervosa														1(Arboretum at Gaja); 1(Ficus Garden, Lalkuan)	2	Medicinal	India, Nepal, Sri Lanka and China.


23.	<b>Moraceae;</b> <i>Ficus foveolata</i> Wall. ex Miq. var. <i>maliformis</i> King			Gaja	157									157	1 (Arboretum at Gaja) 4 (Ficus Garden, Lalkuan)		162	Medicinal	India, Bhutan, China and Myanmar.
		Betuliwali bel																	
24.	<b>Moraceae;</b> <i>Ficus arnottiana</i> (Miq.) Miq.														1 (Arboretum, Haldwani); 2 (Ficus Garden, Lalkuan)		3	Fodder and Medicinal	India, Nepal and Sri Lanka.
		Paras pipal																	
25.	<b>Moraceae;</b> <i>Ficus mysorensis</i> Heyne ex Roth														1 (Arboretum, Haldwani), 1 (Ficus Garden, Lalkuan)		2	Edible and Medicinal	India, Bangladesh, Malaysia, Myanmar and Sri Lanka.
		Mysore bargad																	
26.	<b>Moraceae;</b> <i>Ficus lutea</i> Vahl		Least Concern (IUCN)												1 (Ficus Garden, Lalkuan)		1	Medicinal and Dye	Eastern Cape of South Africa to Tropical Africa
		Giant leaved fig																	
27.	<b>Moraceae;</b> <i>Ficus scandens</i> Roxb.														2 (Ficus Garden, Lalkuan)		2	Medicinal	India, China, Nepal, Myanmar, Bhutan and Thailand.
		Creeping fig or Climbing fig																	







28.	<b>Moraceae;</b> <i>Ficus scandens</i> var. variegated															1(Ficus Garden, Lalkuan)			India, China, Nepal, Myanmar, Bhutan and Thailand.
29.	<b>Moraceae;</b> <i>Ficus tsjahela</i> Roxb.ex Buch. Ham.	 Karal Fig														1(Ficus Garden, Lalkuan)	1		India and Sri Lanka.
30.	<b>Moraceae;</b> <i>Ficus talbotii</i> King	 Talbot Fig														1(Ficus Garden, Lalkuan)	1		South India, Sri Lanka and Myanmar.
31.	<b>Moraceae;</b> <i>Ficus andamanica</i> Corner		Endangered (IUCN)													1(Ficus Garden, Lalkuan)	1		Endemic to India.
32.	<b>Moraceae;</b> <i>Ficus cyathistipula</i> Warb.															1(Ficus Garden, Lalkuan)	1		Native to the tropical forest regions of Africa.
33.	<b>Moraceae;</b> <i>Ficus saemocarpa</i> Miq,															10(Ficus Garden, Lalkuan)	10	Edible and Fodder	India, Bhutan China, Nepal and Myanmar.



34.	<b>Moraceae;</b> <i>Ficus exasperata</i> Vahl	 Sandpaper fig														11 (Ficus Garden, Lalkuan)	11	Medicinal	India (Nicobar Islands and Southern region) Sri Lanka.
35.	<b>Moraceae;</b> <i>Ficus ovata</i> Vahl															1 (Ficus Garden, Lalkuan)	1	Medicinal	Native to Mozambique.
36.	<b>Moraceae;</b> <i>Ficus altissima</i> Blume	 Council tree														1 (Ficus Garden, Lalkuan)	1	Medicinal	Native to Southeast Asia.
37.	<b>Moraceae;</b> <i>Ficus hirta</i> Vahl															1 (Ficus Garden, Lalkuan)	1	Medicinal	India, China, Indochina and Myanmar.
38.	<b>Moraceae;</b> <i>Ficus elastica</i> Roxb. (black)	 Rubber fig														1 (Ficus Garden, Lalkuan)	1	Edible and Medicinal	India, Bhutan, Myanmar and Nepal.
39.	<b>Moraceae;</b> <i>Ficus elastica</i> var. variegated	 Rubber fig														1 (Ficus Garden, Lalkuan)	1	Edible and Medicinal	India, Bhutan, Myanmar and Nepal.

40.	<b>Moraceae;</b> <i>Ficus elastica</i> var. decora	 Rubber fig														1(Ficus Garden, Lalkuan)		1	Edible and Medicinal	India, Bhutan, Myanmar and Nepal.
41.	<b>Moraceae;</b> <i>Ficus elastica</i> var. green	 Rubber fig														1(Ficus Garden, Lalkuan)		1	Edible and Medicinal	India, Bhutan, Myanmar and Nepal.
42.	<b>Moraceae;</b> <i>Ficus elastica</i> var.rubra	 Rubber fig														1(Ficus Garden, Lalkuan)		1	Edible and Medicinal	India, Bhutan, Myanmar and Nepal.
43.	<b>Moraceae;</b> <i>Ficus maclellandii</i> King	 Alii Fig or Banana Leaf Fig														1(Ficus Garden, Lalkuan)		1	Ornamental	India (Assam and Meghalaya) Myanmar.
44.	<b>Moraceae;</b> <i>Ficus starlight</i>	 Ficus starlight														13(Ficus Garden, Lalkuan)		13	Ornamental	Native to Asia and Australia.
45.	<b>Moraceae;</b> <i>Ficus microcarpa</i> L. f.	 Chinese banyan														1(Ficus Garden, Lalkuan))		1	Medicinal and Fuelwood	India, Bhutan, China, Japan, Nepal, Sri Lanka, Malaysia and Taiwan.

46.	<b>Moraceae;</b> <i>Ficus retusa</i> L.															3(Ficus Garden, Lalkuan)		3	Ornamental	Malaysia		
47.	<b>Moraceae;</b> <i>Ficus racemosa</i> L.	 Cluster fig tree, Indian fig or goolar fig		Lalkuan	52											52	4 (Ficus Garden, Lalkuan)		56	Edible and Medicinal	India (Outer Himalaya to plains and low hills) Pakistan, Nepal, Myanmar and Sri Lanka.	
48.	<b>Moraceae;</b> <i>Ficus pomifera</i> Wall. ex King																1(Ficus Garden, Lalkuan)		1	Edible	Indo – Chinese region.	
49.	<b>Moraceae;</b> <i>Ficus benjamina</i> L.	 Weeping fig															14(Ficus Garden, Lalkuan)		14	Medicinal and Fuelwood	India (Cultivated throughout), China, Malaysia to the Solomon Islands.	
50.	<b>Moraceae;</b> <i>Ficus benjamina</i> L. var. nuda	 Weeping fig															15(Ficus Garden, Lalkuan)		15	Medicinal and Fuelwood	India (Assam, Sikkim, Bihar) China, Myanmar, Nepal and Bhutan.	
51.	<b>Moraceae;</b> <i>Ficus heterophylla</i> L. f.			Lalkuan	2												2	1(Ficus Garden, Lalkuan)		3	Medicinal	India, China, Myanmar, Sri Lanka and Indochina.

52.	<b>Moraceae;</b> <i>Ficus amplissima</i> J.E. Sm, <i>Syn. Ficus tsiela</i> Roxb. ex Buch. Ham	 Indian Bat fig														6(Ficus Garden, Lalkuan)		6	Medicina, Edible and Fuelwood	India ( Central and South provinces) Sri Lanka.
53.	<b>Moraceae;</b> <i>Ficus cupulata</i> Haines	 Rare	Rare BULL. BUT. SURV. INDIA VOL,44(140):2002													1(Ficus Garden, Lalkuan)		1	Fuelwood	Endemic to India.
54.	<b>Moraceae;</b> <i>Ficus drupacea</i> Thunb.	 Brown woolly fig														1(Ficus Garden, Lalkuan)		1	Medicinal	India (Southern region) Bangladesh, China, Nepal, Sri Lanka and Thailand.
55.	<b>Moraceae;</b> <i>Ficus iceland</i>															148 (Ficus Garden, Lalkuan)		148	Ornamental	Tropical East Asia (Bonsai)
56.	<b>Moraceae;</b> <i>Ficus triangularis</i>	 Triangle Fig														11(Ficus Garden, Lalkuan)		11	Ornamental	South Africa
57.	<b>Moraceae;</b> <i>Ficus triangularis</i> var. variegata	 Triangle Fig														15(Ficus Garden, Lalkuan)		15	Ornamental	South Africa







58.	<b>Moraceae;</b> <i>Ficus longifolia</i> Schott	 Narrow Leaf Fig													1(Ficus Garden, Lalkuan)		1	Ornament al	India to northern Australia
59.	<b>Moraceae;</b> <i>Ficus cyathistipuloide s</i> De. Wild.														1(Ficus Garden, Lalkuan)		1	Ornament al	Native to Africa
60.	<b>Moraceae;</b> <i>Ficus dalhousiae</i> (Miq.) Miq.			Lalkuan	25									25	1(Ficus Garden, Lalkuan)		26	Ornament al	Endemic to India
61.	<b>Moraceae;</b> <i>Ficus cercinalis</i>														1(Ficus Garden, Lalkuan)		1	Ornament al	
62.	<b>Moraceae;</b> <i>Ficus assamica</i> Miq.			Lalkuan	55									55	10 (Ficus Garden, Lalkuan)		65	Ornament al	India, Bangladesh, Nepal, S. China and Thailand

63.	<b>Moraceae;</b> <i>Ficus fishhook</i>															2(Ficus Garden, Lalkuan)		2	Ornamental	
64.	<b>Moraceae;</b> <i>Ficus jagala</i>			Lalkuan	12											1(Ficus Garden, Lalkuan)		13		
65.	<b>Moraceae;</b> <i>Ficus travancorica</i> King.															1(Ficus Garden, Lalkuan)		1	Ornamental	South India
66.	<b>Moraceae;</b> <i>Ficus hookeriana</i> Corner															1(Ficus Garden, Lalkuan)		1	Fodder	India (Sikkim, Meghalaya, Arunachal Pradesh) Bhutan, China and Nepal.
67.	<b>Moraceae;</b> <i>Ficus kingbush</i>															16(Ficus Garden, Lalkuan)		16	Ornamental	Asia

68.	<b>Moraceae;</b> <i>Ficus callosa</i> Willd			Lalkuan	20										1(Ficus Garden, Lalkuan)		21	Ornament al	India, China, Myanmar, Sri Lanka and Thailand.
69.	<b>Moraceae;</b> <i>Ficus blackii</i>													1	1(Ficus Garden, Lalkuan)		1	Fuelwood	
70.	<b>Moraceae;</b> <i>Ficus beddomei</i> King														1(Ficus Garden, Lalkuan)		1	Edible	Endemic to India.
71.	<b>Moraceae;</b> <i>Ficus mollis</i> Vahl ( Hariyana)	 Soft Fig													1(Ficus Garden, Lalkuan)		1	Medicinal	India (Central and Southern provinces) Jharkhand, Rajasthan, Sri Lanka.
72.	<b>Moraceae;</b> <i>Ficus mollis</i> ( Indore)	 Soft Fig													1(Ficus Garden, Lalkuan)		1	Medicinal	India (Central and Southern provinces) Jharkhand, Rajasthan, Sri Lanka.

73.	<b>Moraceae;</b> <i>Ficus green land</i>															1(Ficus Garden, Lalkuan)		2		
74.	<b>Moraceae;</b> <i>Ficus nitida</i>															1(Ficus Garden, Lalkuan)		1	Ornamental	
75.	<b>Moraceae;</b> <i>Ficus nitida</i> var. variegated															1(Ficus Garden, Lalkuan)		1	Ornamental	
76.	<b>Moraceae ;</b> <i>Ficus curtipes</i> Corner															1(Ficus Garden, Lalkuan)		1	Ornamental	India (Assam, Manipur, Sikkim, Tripura) Bhutan, China, Nepal and Myanmar.
77.	<b>Moraceae;</b> <i>Ficus obscura</i>															1(Ficus Garden, Lalkuan)		1		Japan, China and southeast Asia.
78.	<b>Moraceae;</b> <i>Ficus safari</i>															1(Ficus Garden, Lalkuan)		1	Ornamental	Tropical Asia and Australia



79.	<b>Moraceae;</b> <i>Ficus jag</i> <i>Damvar</i>															1(Ficus Garden, Lalkuan)		1		
80.	<b>Moraceae;</b> <i>Ficus reginald</i>															1(Ficus Garden, Lalkuan)		1	Ornament al	Asia
81.	<b>Moraceae;</b> <i>Ficus variegata</i> Blume	 Red Stem Fig														1(Ficus Garden, Lalkuan)		1	Ornament al	Asia and Southeast Australia
82.	<b>Moraceae;</b>															1(Ficus Garden, Lalkuan)		1		
83.	<b>Moraceae;</b>															1(Ficus Garden, Lalkuan)		1		
84.	<b>Moraceae;</b>															1(Ficus Garden, Lalkuan)		1		






85.	<b>Moraceae;</b>																1(Ficus Garden, Lalkuan)		1			
86.	<b>Moraceae;</b>																	1(Ficus Garden, Lalkuan)		1		
87.	<b>Moraceae;</b>																	1(Ficus Garden, Lalkuan)		1		
88.	<b>Moraceae;</b>																	1(Ficus Garden, Lalkuan)		1		
89.	<b>Moraceae;</b>																	1(Ficus Garden, Lalkuan)		1		







90.	<b>Moraceae;</b>																		1(Ficus Garden, Lalkuan)		1		
91.	<b>Moraceae;</b>																		1(Ficus Garden, Lalkuan)		1		
92.	<b>Moraceae;</b>																		1(Ficus Garden, Lalkuan)		1		
93.	<b>Moraceae;</b>																		1(Ficus Garden, Lalkuan)		1		
94.	<b>Moraceae;</b>																		1(Ficus Garden, Lalkuan)		1		
95.	<b>Moraceae;</b>																		1(Ficus Garden, Lalkuan)		1		








96.	<b>Moraceae;</b>																	1(Ficus Garden, Lalkuan)		1		
97.	<b>Moraceae;</b>																	1(Ficus Garden, Lalkuan)		1		
98.	<b>Moraceae;</b>																	1(Ficus Garden, Lalkuan)		1		
99.	<b>Moraceae;</b>																	1(Ficus Garden, Lalkuan)		1		
100.	<b>Moraceae;</b>																	1(Ficus Garden, Lalkuan)		1		
101.	<b>Moraceae;</b>																	1(Ficus Garden, Lalkuan)		1		








## II. Pine

S. No	Family; Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Uttarakhand Govt./ Indian Biodiversity Portal)	Nursery								Experiment Site	Preservation Plot	Grand Total	Use	Native Region	
				Nursery Name													Total
				1		2		3		4							
Nursery Name	No. Of Plant	Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant	Nursery Name	No. Of Plant										
1.	<b>Pinaceae;</b> <i>Pinus ayacahuite</i> Ehrenb.ex Schltdl.	 Mexican white pine	Least concern (IUCN)									6 (Pineatum)		6	Ornamental and construction work.	Native to the mountains of Southern Mexico and West Central America.	
2.	<b>Pinaceae;</b> <i>P. caribaea</i> Morelet		Least concern (IUCN)									7 (Pineatum)		7	Construction work and timber	Native to Central America, Cuba, the Bahamas and the Turks and Caicos Islands.	
3.	<b>Pinaceae;</b> <i>P. canariensis</i> C. Sm.		Least concern (IUCN)									3 (Pineatum)		3	Ornamental and construction work.	California., United States of America.	
4.	<b>Pinaceae;</b> <i>P. densiflora</i> Siebold & Zucc.		Least concern (IUCN)									1 (Pineatum)		1	Timber production and ornamental	Japan, the Korean, Peninsula, Northeastern China.	
5.	<b>Pinaceae;</b> <i>P. echinata</i> Mill.		Least concern (IUCN)									238 (Pineatum)		238	Construction work.	Native to the Eastern United States from Southern New Jersey, South to Northern Florida, West to Eastern Texas.	

6.	<b>Pinaceae;</b> <i>Pinus elliotti</i> Engelm.		Least concern (IUCN)									55 (Pineatum)		55	Construction work.	Native to the Southeastern United States from Southern Carolina west to Southeastern Louisiana.
7.	<b>Pinaceae;</b> <i>Pinus greggii</i> Engelm. ex Parl.		Near Threatened (IUCN)	Gaja	1	Saritataal	4					1907 (Pineatum)		1912	Construction work.	Native to Eastern Mexico.
8.	<b>Pinaceae;</b> <i>Pinus</i> spp.											3 (Pineatum)		3		
9.	<b>Pinaceae;</b> <i>Pinus</i> spp.											3 (Pineatum)		3		
10.	<b>Pinaceae;</b> <i>P. kesiya</i> Royle ex Gordon		Least concern (IUCN)									179 (Pineatum)		179	Construction work.	Its range extends south and east from the Khasi Hills in the northeast Indian state of Meghalaya, to Northern Thailand, Philippines, Myanmar, Cambodia, Laos, Southernmost China, and Vietnam.
11.	<b>Pinaceae;</b> <i>P. leiophylla</i> Schi.ex Schltdl.ex Cham.		Least concern (IUCN)									4 (Pineatum)		4	Construction work.	Found in the mountains of Southeastern Arizona and Southwestern New Mexico.





12.	<b>Pinaceae;</b> <i>P. montezume</i> Lamb.		Least concern (IUCN)										10 (Pineatum)		10	Medicinal and Construction work.	Native to Mexico and Central America.
13.	<b>Pinaceae;</b> <i>P. nigra</i> J.F. Arnold		Least concern (IUCN)										4390 (Pineatum)		4390	Construction work and paper manufacture.	Native to Europe and Asia .Its range extends from Spain and Morocco in east to Eastern Turkey and north to Northeastern Austria and the Crimea, Russia.
14.	<b>Pinaceae;</b> <i>P. oocarpa</i> Schiede .ex Schltdl												3 (Pineatum)		3	Construction work, resin and ornamental.	Native to Mexico and Central America. It is the national tree of Honduras.
15.	<b>Pinaceae;</b> <i>P. patula</i> Schi.ex Schltdl.ex Cham.												583 (Pineatum)		583	Construction work and Pulp production.	Australia, New Zealand, Argentina, Brazil, Southeast Asia, Southern and Eastern Africa.
16.	<b>Pinaceae;</b> <i>P. pinaster</i> Aiton.		Least concern (IUCN)										2 (Pineatum)		2	Construction work and flavonoids.	Portugal and Northern Spain to Southern and Western France, east to Western Italy, and South to Northern Morocco.
17.	<b>Pinaceae;</b> <i>P. pinea</i> L.		Least concern (IUCN)										1 (Pineatum)		1	Construction work and fuel.	Native to the Mediterranean region, occurring in Southern, Europe, Israel, Lebanon and Syria.
18.	<b>Pinaceae;</b> <i>P. rigida</i> Mill.		Least concern (IUCN)										19 (Pineatum)		19	Construction work, fuel and pulp	Native to eastern North America, from Central Maine south to Georgia and as far west as Kentucky







19.	<b>Pinaceae;</b> <i>P. taeda</i> L.	 Lobolly pine	Least concern (IUCN)									465 (Pineatum)		465	Construction work.	Native to the Southeastern United States, from Central Texas east to Florida, and north to Delaware and Southern New Jersey.
20.	<b>Pinaceae;</b> <i>P. thunbergii</i> Parl.		Least concern (IUCN)									4 (Pineatum)		4	Construction work.	Native to coastal areas of Japan.
21.	<b>Pinaceae;</b> <i>Pinus roxburghii</i> Sarg.	 Chir	Least concern (IUCN)									1 (NakshtraV aatika) 5 (Public Healthn Garden) 40		46	Medicinal and Timber	Near Endemic Native to the Himalayas.
22.	<b>Pinaceae;</b> <i>Pinus gerardiana</i> Wall. ex D. Don		Near threatened (IUCN)									4 (Pineatum)		4	Medicinal	Native to the northwestern Himalayas in eastern Afghanistan, Pakistan, and northwest India
23	<b>Pinaceae;</b> <i>Pinus wallichiana</i>	 Blue pine										15 (Gymnospe rm garden, Raditop)		15	Skin complaints and wounds	Himalaya, Karakoram and Hindu kush mountain





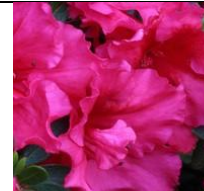
- 2 Species are yet to be identified



### III. Oak

S. No	Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Uttarakhand Govt. / Indian Biodiversity Portal)	Nursery										Experiment Site	Preservation Plot	Grand Total	Use	Native Region			
				Nursery Name															Total		
				1		2		3		4		5								6	
Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant										
1.	<b>Fagaceae;</b> <i>Quercus glauca</i> Thunb.	 Harinj		Mandal	156										156	275 (Kaligarh block –16) & 34 (Miyawaki Experiment)		465	Farming tools	Himalaya to Japan, USA.	
2.	<b>Fagaceae;</b> <i>Quercus leucotrichophora</i> Camus	 Banj		Mandal & Tangsa	550	Kalsi	30	Saritataa & Gajal	4790	Kalika	777	Dwars on	2307	Patalhod	40	8494	420 (Trishula comp. 20 B K.W.L.D) ; 5 (Arboretum at Gaja); 1 (Arboretum, Haldwani); 804 (Miyawaki Experiment)		9744	Fodder and Fuelwood	Indian Himalayan region.
3.	<b>Fagaceae;</b> <i>Quercus semecarpifolia</i> Smith	 Kharsu		Devvan	150	Patalhod	30	Kalika	60							240	145(Trishula comp. 19 B K.W.L.D); 100 (Kaligarh block – 16)		504	Fodder and Fuelwood	Himalayas and nearby mountains in Tibet.
4.	<b>Fagaceae;</b> <i>Quercus floribunda</i> Lindl. ex A. Camus	 Moru		Gaja	50	Bhujiyaghat	175									225	35(Trishula comp. 20 B K.W.L.D); 1(Arboretum at Gaja); 1 (Arboretum, Haldwani)		262	Farming tools	Near Endemic.






5.	<b>Fagaceae;</b> <i>Quercus serrata</i> Thunb.			Kalika	150										150	50 (Kaligarh block – 16); 3(Arboretum at Gaja)		203	Fodder	Himalayas, from Kumaon eastward, Manipur, Khasi hills and upper Myanmar.
6.	<b>Fagaceae;</b> <i>Quercus lamelloa</i> Smith	 Shalshi														5 ( Kaligarh block 16)		5	Fodder and construction work	Himalaya to Southern China
7.	<b>Fagaceae;</b> <i>Quercus pachyphylla</i> Kurz	 Bada katus														5 ( Kaligarh 16)		5	Fodder and construction work	Sikkim and Manipur.
8.	<b>Fagaceae;</b> <i>Quercus lanuginosa</i> Lam.	 Latwa banj	Least concern (IUCN, FFI and BGCI)	Kalika	18										18	249 (Kaligarh block – 16); 15 plants (Miyawaki Experiment).		282	Fodder and tanning	Native to East Asia China, Northern Thailand and Vietnam







**IV. Rhododendron:**







S. No	Scientific Name	Local Name and Photo	Conservation Status (IUCN/ Biodiversity Board/ENVIS/ Uttarakhand Govt./ Indian Biodiversity Portal)	Nursery												Experiment Site	Preservation Plot	Grand Total	Use	Native Region	
				Nursery Name											Total						
				1		2		3		4		5		6							
				Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant						
1.	<b>Ericaceae;</b> <i>Rhododendron arboreum Sm.</i>	 Burans	Least concern (IUCN)	Mandal	1000	Tangsa	450	Dwars on	9	Patalthod	2950	Kalika	443	Sariatal	8	4860	2 (Arboretum at Gaja)		4862	Edible	Indian Himalayan Region.
2.	<b>Ericaceae;</b> <i>Rhododendron barbatum Wall.ex G.Don</i>			Patalthod	50											50			50	Leaves are used as fish poison.	Indian Himalayan Region.
3.	<b>Ericaceae;</b> <i>Rhododendron campanulatum D.Don</i>			Patalthod	50											50			50	Medicinal	Himalayan alpine regions of Northern India (Sikkim, HP, UK), Bhutan, and Nepal.
4.	<b>Ericaceae;</b> <i>Rhododendron anthopogon D. Don</i>	 Tagsu		Mandal	10											10			10	Medicinal	Near Endemic India, Nepal and China
5.	<b>Ericaceae;</b> <i>Azalea japonica</i>			Kalika	364	Dwars on	2									366			366	Ornamental	Asia, Europe and North America

6.	<b>Ericaceae;</b> <i>Azalea indica</i>			Kalika	5													5			5	Orname ntal	Asia, Europe and North America.	
7.	<b>Ericaceae;</b> <i>Rhododendron niveum</i>			Kalika	4																	4	Medicin al and Orname ntal	Native to northeastern India

## V. Other Tree Species:







S. No	Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Uttarakhand Govt./ Indian Biodiversity Portal)	Nursery										Experiment Site	Preservation Plot	Grand Total	Use	Native Region	
				Nursery Name															Total
				1		2		3		4		5							
Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant								
1.	<b>Lauraceae;</b> <i>Persea odoratissima</i> Nees.	 Kaula		Mandal	19700	Tangsa	1000								20700		20700	Fuelwood and Fodder	SE Asia – India.
2.	<b>Lauraceae;</b> <i>Cinnamomum tamala</i> Nees.	 Tejpat	Limited collection allowed by Uttarakhand Government	Mandal	265	Tangsa	2900	Kalika	2121	Bhujiyaghat/Gaja/Sariatal	8602	Patalthod	482	Dwarson	1673	16043	188 (Miyawaki Experiment); 2(Arboretum at Gaja); 1 (Arboretum, Haldwani) 5 (Public Health Garden)	Spice and Medicinal	Near Endemic
3.	<b>Oleaceae;</b> <i>Fraxinus micrantha</i> Linglesh	 Angu	Data Deficient (IUCN)	Mandal	300	Kalika	3314	Sarिताal	247	Dwarson	1000	Patalthod	40	Gaja	1950	6851	63 (Miyawaki Experiment); 1(Arboretum at Gaja)	Fuelwood	Central America
4.	<b>Aceraceae;</b> <i>Acer oblongum</i> Wall.ex DC.	 Pharbanj	Endangered (Indian Biodiversity Portal)	Mandal	820	Tangsa	380	Kalika/Dwarson	1380/450	Patalthod	400	Shyam pur	30	Gaja	2341	5801	40 (Mana Vanpanchayat ); 134 (Miyawaki Experiment); 1(Arboretum at Gaja); 120 (RET demonstration plot, Harkot, Munsyari).	Fodder and Timber	Pakistan, Nepal and China
5.	<b>Rhamnaceae;</b> <i>Hovenia dulcis</i> Thunb.	 Aunga	Least concern (IUCN)	Mandal	180	Tangsa	250	Kalika & Dwarson	1335	Devsan	68	Gaja	1909	Sariatal	35	3777	133 (Miyawaki Experiment); 1(Arboretum Gaja)	Medicinal	Japan, China, North Korea, and Thailand.







6.	<b>Betulaceae;</b> <i>Alnus nepalensis</i> Don.	 Utish	Least concern (IUCN)	Mandal	600	Tangsa	4000	Kalika	612	Dwarson	525	Gaja	2451			8188	124 (Miyawaki Experiment); 5(Arboretum Gaja) ; 1 (State tree Haldwani)		8318	Fuel Wood	Indian Himalayan Region.
7.	<b>Betulaceae;</b> <i>Betula alnoides</i> Buch. Ham.	 Saur		Mandal	800	Dwarson	250	Patalthod	100							1150			1150	Timber	Indian Himalayan Region.
8.	<b>Betulaceae;</b> <i>Betula utilis</i> D. Don	 Bhoj patra	Least concern (IUCN)	Mandal	20			Patalthod	78							98	20 (Mana Vanpanchayat); 1(Arboretum at Gaja); 115(RET demonstration plot, Harkot, Munsyari);93 (Miyawaki Experiment, Kalika)		327	Religious and Medicinal	Indian Himalayan Region.
9.	<b>Juglandaceae;</b> <i>Juglans regia</i> L.	 Akhrot	Least concern (IUCN)	Mandal	3500	Tangsa	3890	Shrikot	20	Gaja	687					8097	14 (Miyawaki Experiment, Kalika); 1(Arboretum, Haldwani) 5Sarital ( Medicinal beds)		8117	Edible and Medicinal.	Near Endemic.
10.	<b>Oleaceae;</b> <i>Olea glandulifera</i> Wall.	 Garura		Gaja	441	Tangsa	3100	Shrikot	1800	Sariatal	155					5496	2(Arboretum Gaja)		5498	Fodder, Bird attractin and Butterfly Host plant	Pakistan and China throughout tropical Asia to Australia.
11.	<b>Lythraceae;</b> <i>Punica granitum</i> L.	 Darim	Least concern (IUCN)	Gaja	184	Tangsa	4800	Shrikot	830	Kalika	407	Dwarson	1000	Sariatal	450	7671	597 (Miyawaki Experiment); 1(Arboretum at Gaja) 8 ((Public Health Garden); 10 (Food Forest, Lalkuan)		8287	Edible and Medicinal.	Iran to northern India.







12.	<b>Cornaceae;</b> <i>Cornus capitata</i> Wall	 Bhamor		Dwarson	1293	Tangsa	2067	Shrikot	1700	Kalika	3731	Saritatal	65	Dwarson	1099	9955	1185 (Kaligarh block 16) & (Dwarson block 16); 1(Arboretum at Gaja); 94 (Miyawaki Experiment) 5 (Public Healthn Garden)	11272	Edible	Indian Himalayan Region.
13.	<b>Betulaceae;</b> <i>Corylus jacquemontii</i> Dene.	 Kabasi	Data Deficient (IUCN) Rare in Himalayan Region.	Mandal	55	Tangsa	5									60	52(Tangsa nursery); 5 (RET demonstration plot, Harkot, Munsyari); 3 (Miyawaki Experiment)	120	Medicinal and Edible	India, Afghanistan, Nepal and Pakistan.
14.	<b>Caesalpiniaceae;</b> <i>Bauhinia purpurea</i> L.	 Purple Orchid Tree	Least concern (IUCN )			Tangsa	80									80	1(Arboretum at Gaja); 5 (Tower of Flower)	86	Edible	South China and Southeastern Asia.
15.	<b>Myricaceae;</b> <i>Myrica esculenta</i> Buch. Ham. Ex D.Don	 Kaphal		Mandal	350	Tangsa	199	Kalika	250	Dwarson	1048					1847	935 (Kaligarh block 16) and (Dwarson block 16) & 55 (Miyawaki Experiment); 2 (Arboretum at Gaja) 363( Dwarson block 16); 8(Sal associate experimental site, Lalkuan)	3226	Edible	Northern India, Southern Bhutan and Nepal.
16.	<b>Urticaceae;</b> <i>Boehmeria rugulosa</i> Wedd.	 Ghenti			Tangsa	4	Gaja	72	Saria taal	100	Bhujiyaghat	500				676	1(Arboretum Gaja) 10 (Public Healthn Garden)	687	Fodder	India, Nepal, Bhutan
17.	<b>Sapotaceae;</b> <i>Diploknema butyracea</i> (Roxb.)H.J.Lam	 Chiura		Mandal	22000	Tangsa	2480	Dwarson	50	Gaja	182	Bhujiyaghat	200			24912	1(Arboretum at Gaja); 1(Arboretum, Haldwani) 5 (Public Health Garden)	24918	Ghee and Soap	Sub Himalayan Tract.











18.	<b>Tiliaceae;</b> <i>Grewia oppositifolia</i> Roxb.ex Mast.	 Bhimal		Tangsa	240	Kalika	505	Dwar son	527	Kalsi	125	Gaja	478			1875	373 (Miyawaki Experiment); 1(Arboretum Gaja); 16(Sal associate experimental site, Lalkuan) 10 (Shrub conservatory, Lalkuan)		2275	Fodder	Near Endemic
19.	<b>Sapindaceae;</b> <i>Sapindus mukorossi</i> Gaertn.	 Ritha		Tangsa	80	Kalsi	52	Dwar son	37	Gaja	28	Bhujiy aghat	1045			1242	1(Arboretum at Gaja); 1 SarvDharmvaatika ; 1 (Arboretum, Haldwani);39 (Miyawaki Experiment) 108 (Lantana plot) 5 (Public Health Garden)		1397	Medicinal	India; Japan.
20.	<b>Rosaceae;</b> <i>Pyrus pashia</i> Buch. Ham ex Don	 Mehal	Least concern (IUCN )	Tangsa	50	Kalika	112	Kalsi	20	Gaja / Bhujiyaghat	972 /170	Dwars on	98	Sariatal	240	1662	162 (Miyawaki Experiment); 1(Arboretum at Gaja)		1825	Edible	Indian Himalayan Region.
21.	<b>Ginkgoaceae;</b> <i>Ginkgo biloba</i> L.	 Maiden hair tree	Endangered (IUCN)	Mandal	7	Tangsa	1	Kalika	255	Dwar son	347	Devvan	7	Saritalaal	366	983	59 (Kaligarh); 1(Arboretum at Gaja); 2 (Arboretum, Haldwani) ; 4 (Jurassic Garden, Haldwani) 5 (Public Healthn Garden)		1054	Medicinal	China
22.	<b>Taxaceae;</b> <i>Taxus baccata</i> ssp. <i>wallichiana</i> (Zucc) Pilger	 Thuner	Least concern IUCN Red List Collection closed for the time being by Uttarakhand Government.	Dwars on	89	Dwars on	536	Patal thod	900							1525	290(Mandal nursery): 33(R.E.T Devvan); 1(Arboretum at Gaja);114(RET demonstration); 56 (Miyawki Experimentrt) 3 (Public Healthn Garden)		2022	Medicinal	Indian Himalayan Region.
23.	<b>Pinaceae;</b> <i>Abies pindrow</i> (Royle ex D.Don) Royle	 Raga	Least concern (IUCN)	Patal hod	455											455	382 (Trishula comp. 19 B K.W.L.D) 6 (Gymnosperm garden, Raditop)		843	Medicinal and Timber	Afghanistan, India (Uttarakhand, HP, J&K), Nepal and Pakistan.

24.	<b>Pinaceae;</b> <i>Tsuga dumosa</i> Carr.	 Tansen	Least concern (IUCN)	Mandal	10	Dwarson	28	Patalthod	100							138	35 (Mana vanpanchayat); 50 (Miyawaki Experiment)	223	Timber	Bhutan, China, India.
25.	<b>Aceraceae;</b> <i>Acer caesium</i> Wall. & Brandis	 Kanchula	Least concern (IUCN); vulnerable (ENVIS); Vulnerable (Indian Biodiversity Portal)	Mandal	400											400	15 (Mana vanpanchayat)	415	Fodder	Near Endemic
26.	<b>Platanaceae;</b> <i>Platanus orientalis</i> L	 Chinar	Data Deficient (IUCN)	Mandal	1	Dwarson	57	Patalthod	230	Sariatool	191					479	1 (Arboretum Gaja)	480	Ornamental	Southeastern Europe and Asia.
27.	<b>Cupressaceae;</b> <i>Cryptomeria japonica</i> (L.f.) D. Don		Near Threatened (IUCN)	Mandal	20											20	(10) Gymnosperm garden	30	Timber	Endemic to Japan.
28.	<b>Pinaceae;</b> <i>Cedrus deodara</i> (Royle ex D Don) G Don	 Deodar	Least concern (IUCN)	Mandal	200	Dwarson	540	Devvan	800	Patalthod	850	kalika	2555	Sariatool	40	4985	1 (Arboretum Gaja) 30 (Gymnosperm garden, Raditop)	5016	Timber	Near Endemic
29.	<b>Oleaceae;</b> <i>Osmanthus fragrans</i> Lour.	 Silang	Least concern (IUCN)	Mandal	200	Patalthod	100									300	30 Aromatic plants (Bhujiyaghat) 10 (Aromatic Project Site)	340	Perfumery	China






30.	<b>Salicaceae;</b> <i>Salix (clone)</i>	 Salix														533 (Trishula camp. 1)		533	Medicinal and Timber	Himachal Pradesh	
31.	<b>Lauraceae;</b> <i>Machilus duthiei</i> King.	 Kaula		Kalika	29	Dwarson	540	Saritataal	16							585	74 plants (Miyawaki Experiment); 1(Arboretum Gaja)		660	Fodder	Near Endemic.
32.	<b>Cornaceae;</b> <i>Cornus macrophylla</i> Wall.	 Khagaas				Saritataal	348									348	349 (Miyawaki Experiment); 1(Arboretum Gaja); 10 (Public Health Garden)		698	Medicinal	Northern India, Nepal, Bhutan and Pakistan.
33.	<b>Rosaceae;</b> <i>Starnvaesia glucescens</i> Lind.	 Gadhmehal		Kalika	8											8	574 (Miyawaki Experiment)		582	Fodder and Fuel	South China, Indonesia and Philippines.
34.	<b>Pittosporaceae</b> ; <i>Pittosporium eriocarpum</i> Royle	 Tumri	Endangered (IUCN ) Indeterminate (ENVIS)	Dwarson	200	Gaja	416									616	1(Arboretum Gaja) 5 (Public Healthn Garden)		622	Medicinal	Endemic
35.	<b>Betulaceae;</b> <i>Carpinus viminea</i> Lind.	 Himalayan Hornbean	Least Concern (IUCN )	Dwarson	110	Patalthod	74									184	774 (Miyawaki Experiment)	Nainital	958	Fodder	Pakistan, Nepal and Europe

36.	<b>Phyllanthaceae;</b> <i>Phyllanthus emblica</i> L.	 Amla		Dwarson	7	Kalsi	1250	Bhuiyaghat	750	Shyampur	5810	Thano	14500			74717	1(Arboretum at Gaja); 1 (Nakshtra Vaatika); 2 (TriphalaVaatika); 10 (Miyawaki, Haldwani); 1 (SarvDharmVaatika); 1 (Buddha vaatika) 5 (Public Health Garden)		74738	Medicinal	India, Sri Lanka, Uzbekistan and South Asia.
37.	<b>Rosaceae;</b> <i>Prunus armeriaca</i> Marsh.	 Chullu		Dwarson	1142	Gaja	1314	Sariatatal	2013							4469	349 (Miyawaki Experiment)		4818	Edible	North America and Florida
38.	<b>Fagaceae;</b> <i>Castanea sativa</i> Mill.	 Sweet chestnut															7 (Miyawaki Experiment)		7	Edible	Southern Europe
39.	<b>Rosaceae;</b> <i>Prunus cerasoides</i> D. Don	 Padam	Least concern (IUCN)	Kalsi	112	Saritatal/Gaja	283/1489	Mandal	400	Tangsa	200	Dwarson	600	Kalika	200	3284	2 (Miyawaki Experiment); 1 (Arboretum at Gaja); 1(Arboretum Haldwani)		3288	Ornamental, Dye and Walking sticks.	Nepal, Bhutan, China and Myanmar
40.	<b>Combretaceae;</b> <i>Terminalia tomentosa</i> Willd.	 Asna/Saaj		Kalsi	20	Shyampur	2121	Lalkuan	105							2246	1(Arboretum Haldwani); 8(Mixed biodiversity plot, Lalkuan)		2255	Timber	India, Nepal, Myanmar, Thailand and Vietnam.
41.	<b>Combretaceae;</b> <i>Terminalia bellirica</i> (Gaertn.)Roxb.	 Bahera		Kalsi	426	Lalkuan	17	Tangsa	25	Bhuiyaghat	707	Shyampur	1905			3080	1(Arboretum Haldwani); 10 (Public Health Garden)	3091	1194	Medicinal	Lower hills in Southeast Asia







42.	<b>Combretaceae;</b> <i>Terminalia chebula</i> Retz.	 Harrar		Kalsi	228	Lalkuan	220	Bhujia	17	Shyampur	20	Thano	2000			2485	3 (Triphala Vaatika, Haldwani); 1 (Arboretum, Haldwani); 70 (Color& tanning experimental plot), 24 (Sal associate experimental plot, Lalkuan); 10 (Public Health Garden)		2593	Medicinal	South Asia India and Nepal, China, Vietnam.
43.	<b>Sapindaceae;</b> <i>Schleichera oleosa</i> (Lour.)Oken	 Kusum	Least concern (IUCN)	Kalsi	177	Shyampur	320									497	100 (RET Plot, Shyampur); 12 (Miyawaki, Haldwani); 3 (Arboretum, Haldwani); 16(Mixed biodiversity plot, Haldwani)		628	Medicinal	India, Myanmar, Nepal, Pakistan, Sri Lanka and Vietnam.
44.	<b>Euphorbiaceae</b> ; <i>Bridelia retusa</i> (L.)A. Juss.	 Spinous kino	Least concern (IUCN)	Kalsi	310	Shyampur	750	Lalkuan	20							1080	735 (River range Kalsi); 100(RET plot); 96 Chakferi block (Seed Orchard); 14(Mixed biodiversity plot, Lalkuan)		2025	Medicinal	India, Myanmar, Nepal, China, Sri Lanka and Vietnam.
45.	<b>Rutaceae;</b> <i>Aegle marmelos</i> (L.) Correa	 Bel		Kalsi	190	Shyampur	20579	Haldwani	373	Lalkuan	150	Gaja	1122	Bhujia	998	23412	1(Arboretum at Gaja); 1 (Nakshatra Vaatika); 1 (SarvdharmVaatika); 5 (Arboretum, Haldwani)/9 (Miyawaki); 1 (Dashmool demo plot, Haldwani); 1 (PanchVati); 27 (Dashmool species plot, Lalkuan); 10 (Public Health Garden)		23468	Edible and Medicinal	Indian subcontinent and Southeast Asia.







46.	<b>Rubiaceae;</b> <i>Hymenodictyon excelsum</i> Wall.	 Bhulan/ Borang		Kalsi	90	Bhujiy aghat	260	Shya mpur	350	Lalk uan	4					704	44(River range Kalsi); 1 (Arboretum at Gaja); 100 (Riparian plot); 97 (Chakferi block (Seed Orchard); 5(Miyawaki, Haldwani); 6 Arboretum, Haldwani; 6 (Sal associate 1 site, Lalkuan); 5 (Public Health Garden)		968	Medicin al	Sub Himalaya n tract.
47.	<b>Boraginaceae;</b> <i>Cordia myxa</i> L.	 Lassora		Kalsi	23	Shyamp ur	2200	Lalk uan	30							2253	100 (Riparian plot); 101 Chakferi block (Seed Orchard); 16(Miyawaki, Haldwani) ; 1 (Arboretum, Haldwani); 16(Mixed biodiversity plot, Lalkuan); 10 (Public Health Garden)		2497	Medicin al	Tropical Africa; Middle East Asia.
48.	<b>Lecythidaceae;</b> <i>Careya arborea</i> Roxb.	 Kumbhi		Kalsi	230	Shyamp ur	670	Hald wani	11	Lalk uan	56					967	38 (River range Kalsi); 1(Arboretum at Gaja); 200(RET plot, Shyampur); 2 Arboretum; 3(Miyawaki), Haldwani; 12 (Mixed biodiversity plot),99(Gum species plot), 70(Color& tanning exp. Plot, Lalkuan)		1392	Medicin al	Sub Himalaya n tract througho u t Bengal, and Myanmar .
49.	<b>Bignoniaceae;</b> <i>Stereospermum suaveolens</i> (Roxb.)DC.	 Padhal		Kalsi	140	Shyamp ur	5750									5890	8 Pipalparao (Mixed Biodiversity Plot);1 (Miyawaki, Haldwani); 1 Dashmool Demo plot, Haldwani ; 1 (Arboretum, Haldwani); 28 (Dashmool species plot, Lalkuan)		5929	Medicin al, Fuelwo o d and Timber	India , Banglade s h and Myanmar








50.	<b>Mimosaceae;</b> <i>Albizia odoratissima</i> (L.f.) Benth.	 Kala siris	Least Concern (IUCN)	Kalsi	80	Lalkuan	50	Tangsa	100	Shyampur	750	Thano	100			980	40(River range Kalsi); 13(Mixed biodiversity plot, Lalkuan)		1133	Medicinal	India, Myanmar, Nepal, China, Sri Lanka and Vietnam.
51.	<b>Mimosaceae;</b> <i>Albizia procera</i> Benth.	 Safed siris		Kalsi	60	Lalkuan	17	Shyampur	20	Kalsi	108					205	7(Mixed biodiversity plot); Lalkuan		212	Fuelwood and Timber	Northern India and South East Asia.
52.	<b>Sterculiaceae;</b> <i>Sterculia villosa</i> Roxb.	 Udal		Kalsi	15	Lalkuan	20									35	200 (Riparian plot); 1(Arboretum Haldwani); 5 (Miyawaki, Haldwani); 106, (Gum species experimental plot), 3 (Sal associate plot),16 (Mixed biodiversity plot, Lalkuan)		366	Medicinal	Southern India and South Asia.
53.	<b>Caesalpiniaceae;</b> <i>Delonix regia</i> (Boj.ex Hook) Raf.	 Gulmohar	Least concern (IUCN)	Kalsi	60	Lalkuan	65									125	4 (Palmetum); 10 (Tower of Flower)		139	Ornamental	Native to Madagascar
54.	<b>Dilleniaceae;</b> <i>Dillenia indica</i> L.	 Chalta		Kalsi	99											99	10 (Public Healthn Garden)		109	Edible	China and Tropical Asia.
55.	<b>Myrtaceae;</b> <i>Syzygium cumini</i> (L.)Skeels.	 Jamun		Kalsi	90	Kalika	150	Jamun	350	Kalsi	300	Shyampur	2740			3330	1(NakshtraVaatika) ; 1 (Arboretum, Haldwani) 5 (Public Health Garden); 10 (Food Forest Lalkuan)		3347	Edible and Medicinal	Asia and tropical Australia.






56.	<b>Clusiaceae;</b> <i>Mesua ferrea</i> L.	 Naagkesar		Lalkuan	5										5	723 (River range Kalsi); 2 (Arboretum, Haldwani); 8 (Mix biodiversity plot, Lalkuan); 1 (Buddha vaatika); 400 (lantana plot Kalsi); 10 (Public Health Garden);	1149	Timber and Medicinal	Sri Lanka, India, Nepal, Indochina and Malaysia.	
57.	<b>Meliaceae;</b> <i>Azadirachta indica</i> A. Juss.	 Neem	Least concern (IUCN)	Kalsi	80										80	150(Riparian plot); 3 (Arboretum); 11(Miyawaki); 3 (Sarvdharm vaatika);50 lantana plot, kalsi 5 (Public Health Garden)	202	Medicinal	Bhutan, India, Bangladesh and Myanmar	
58.	<b>Cupressaceae;</b> <i>Platycladus orientalis</i> (L.) Franco.	 Morpankhi	Near Threatened (IUCN)	Kalsi	32	Saritataal	30	Patalthod	110	Lalkuan	7				1169	10 (Public Health Garden) 10 (Gymnosperm Garden)	1179	Ornamental	China, Tajikistan and Uzbekistan	
59.	<b>Caesalpiniaceae;</b> <i>Bauhinia retusa</i> Roxb.	 Semal		Kalsi	1900	Gaja	1680	Bhujiyaghat	90	Saria taal	220	Kalika	1495	Dwars on	200	5585	1 (Arboretum, Haldwani) 1(Sal associate experimental site; Lalkuan;900( lantana plot kalsi )	6487	Medicinal	Near Endemic
60.	<b>Caesalpiniaceae;</b> <i>Bauhinia variegata</i> L.	 Kachnar		Lalkuan	114	Shyam pur	20	Kalsi	400	Gaja	203	Bhujiyaghat	750	Kalika	495	5582	1(Arboretum Gaja); 417 Chakferi Block (Seed Orchard) ; 2(Arboretum) 23 (Miyawaki) ;8 (Haldwani); 6 (Sal Associates, experimental site, Lalkuan), 69 (Color & tannin Plot, Lalkuan), 138 (S.S.P.A 2010&2011, Lalkuan); 55 lantana plot, kalsi, 20 riparian plot, Kalsi; 10 (Public Health Garden)	6331	Edible	China , Southeast Asia to the Indian Subcontinent













61.	<b>Ulmaceae;</b> <i>Ulmus wallichiana</i> Planch.	 Emroyi	Vulnerable (IUCN)	Devvan	100	Kalika	75								175	39 (R.E.T Devvan); 21 (Miyawaki Experiment); 21 (Miyawaki Experiment)		256	Fuelwood and Fodder	Near Endemic
62.	<b>Rosaceae;</b> <i>Prunus cornuta</i> Wall.	 Jamoi		Devvan	63										63			63	Edible	Endemic
63.	<b>Aceraceae;</b> <i>Acer pictum</i> Thunb.	 Yellow paint Maple	Least concern (IUCN)													23 (R.E.T Devvan)		23	Fodder	China, Tibet, Japan and Vietnam.
64.	<b>Oleaceae;</b> <i>Olea cuspidata</i> Wall.	 Kau / Brown Olive														522 (R.E.T Devvan)		522	Medicinal	South Africa, Pakistan, India and China.
65.	<b>Bignoniaceae;</b> <i>Oroxylum indicum</i> Vent.	 Syonaka		Shyampur	3660	Lalkuan	10	Kalsi	1121	Thano	1200	Jollygrant	1290		7281	10 (River range Kalsi) 100 (Riparian plot); 1 (Dashmool demo plot, Haldwani) ; 1 (Arboretum, Haldwani); 250(Dashmool species,Lalkuan); 10 (Public Health Garden)		7644	Medicinal	Indian subcontinent
66.	<b>Fabaceae;</b> <i>Acrocarpus fraxinifolius</i> Wight.	 Acrocarpus		Gaja	29										29	6(Arboretum Gaja)		35	Furniture	Sikkim, Assam, Western Dwaras (Jalpaiguri), and Upper Mynamar.






67.	<b>Mimosaceae;</b> <i>Indopiptadenia</i> <i>oudhensis</i> Brand.	 Genti	Threatened (State Biodiversity Board)	Gaja	327	Shyam pur	60	Kalsi	20						407	2(Arboretum Gaja); 50 (RET plot, Shyampur); 2 (Arboretum, Haldwani) ; 4 (Jurassic Garden, Haldwani); 100 (RET plot, Shyampur).		565	Fodder and Timber	Endemic to the Western Himalaya .
68.	<b>Cupressaceae;</b> <i>Taxodium</i> <i>mucronatum</i> Ten.	 Taxodium	Least concern (IUCN)	Gaja	879										879	1(Arboretum Gaja) 25 ( Gymnosperm garden)		905	Constru ction work and Orname ntal	Native to Mexico
69.	<b>Salicaceae;</b> <i>Salix</i> <i>tetrasperma</i> Roxb.	 Bhains		Gaja	523										523	1(Arboretum Gaja)		524	Edible and Furniture making	NE India, Manipur.
70.	<b>Salicaceae;</b> <i>Salix alba</i> L.	 Laila	Least concern (IUCN)	Gaja	1										1	1(Arboretum Gaja)		2	Furniture making and Medicina l	Native to Europe and western and central Asia
71.	<b>Lauraceae;</b> <i>Litsea</i> <i>umbrosa</i> Nees.	 Kaul		Saritat aal	345										345	1(Arboretum Gaja)		346	Medicin al	East Asia and Indian Himalaya n Region.
72.	<b>Ulmaceae;</b> <i>Celtis</i> <i>australis</i> L.	 Kharik		Tangsa	120	Kalika	672	Dwar son	550						1342	1(Arboretum Gaja)		1343	Fodder	Europe and Asia.






73.	<b>Rhamnaceae;</b> <i>Rhamnus triqueter</i> (Wall.) Brandis	 Gonta		Sarital	15										15	1(Arboretum Gaja); 148 lantana plot kalsi		164	Fodder	Near Endemic
74.	<b>Anacardiaceae;</b> <i>Rhus semialata</i> Murray.	 Dhamila	Least concern (IUCN)	Sarital	8										8	1(Arboretum Gaja)		9	Medicinal	China, Japan and North Eastern parts of India.
75.	<b>Verbinaceae;</b> <i>Gmelina arborea</i> Roxb.	 Gamhar		Kalsi	120										120	1(Arboretum Gaja);5 (Miyawaki, Haldwani ; 1 Dashmool, Haldwani); 28 (Dashmool species experimental plot, Lalkuan)		155	Furniture making	Sub Himalaya n tract
76.	<b>Mimosaceae;</b> <i>Albizia lucidor</i> (Steud.)I.C.Niel sen	 Potka siris														1(Arboretum Gaja)		1	Timber	Sub Himalaya n tract
77.	<b>Malvaceae;</b> <i>Chorisia speciosa</i> Ravenna															3(Arboretum Gaja)		3	Edible	Native to Argentina and Brazil
78.	<b>Sterculiaceae;</b> <i>Guazuma ulmifolia</i> Lam.	 Rudrakshi														1(Arboretum Gaja)		1	Constru ction	Native of tropical America
79.	<b>Lythraceae;</b> <i>Lagerstroemia lanceolata</i> Wall.	 Nandi tree														1(Arboretum Gaja)		1	Rafters	Native to Western Ghats

80.	<b>Sterculiaceae;</b> <i>Pterospermum acerifolium</i> Wall.	 Kanak champa		Lalkuan	23									23	4(Arboretum Gaja); 213(Golatappar 7B); 1(Arboretum Haldwani)		241	Medicinal	Foothills of Indian Himalayan Region
81.	<b>Fabaceae;</b> <i>Gleditsia sinensis</i> Lam.														2(Arboretum Gaja)		2	Medicinal	Native to Asia
82.	<b>Paulowniaceae</b> ; <i>Paulownia fortunei</i> Hemsl.														1(Arboretum Gaja)		1	Timber	Native to China and SE Asia
83.	<b>Sterculiaceae;</b> <i>Stereospermum chelonoides</i> DC.	 Padal													1(Arboretum Gaja)		1	Construction work	Native to Western Ghats and tropical Himalaya
84.	<b>Fabaceae;</b> <i>Pongamia pinnata</i> (L.) Panigrahi	 Karanj	Least concern (IUCN)	Lalkuan	97	Shyam pur	90							187	2(Arboretum Gaja); 69 (Color& tanning experimental plot, Lalkuan); 20 ( riparian plot)		278	Medicinal	Native to Indian subcontinent


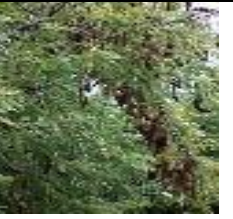


85.	<b>Lauraceae;</b> <i>Cinnamomum camphora</i> F. Nees	 Kapoor																1(Arboretum Gaja); 1 (Aromatic plants(Bhujiyaghat); 1 (Arboretum, Haldwani); 5(Aromatic species project site, Lalkuan)	8	Medicinal	Native to China, Japan, Korea, Taiwan
86.	<b>Sterculiaceae;</b> <i>Sterculia colorata</i> Roxb.	 Kaushi																2(Arboretum Gaja)	2	Rope making	Native to Western Ghats and Deccan.
87.	<b>Fabaceae;</b> <i>Schizolobium parahyba</i> S.F.Blake																	3(Arboretum Gaja)	3	Toy making	Native to Brazil
88.	<b>Bignoniaceae;</b> <i>Haplophragma adenophyllum</i>	 Marodfali																1(Arboretum Gaja) 5 (Public Health Garden)	6	Furniture making	Assam, Myanmar and Bangladesh.
89.	<b>Lauraceae;</b> <i>Cinnamomum glaucescens</i> Hand. Mazz.	 Sugandhkokila																2(Arboretum Gaja)	2	Perfumery	Bhutan, Sikkim. Manipur and Khasi Hills.






90.	<b>Moraceae;</b> <i>Morus alba</i> L.		Lalkuan	14	Tangsa	200	Shyampur	1885							2099	2(Arboretum Gaja); 1(Arboretum, Haldwani)  200 Tangsa		2302	Edible and Sericulture	Northern China and India.
91.	<b>Proteaceae;</b> <i>Grevillea robusta</i> A. Cunn.ex R.Br.		Gaja	1293	Bhujiyaghat	1000									2293	2(Arboretum Gaja)		2295	Furniture making	Native to northern New South Wales and southern Queensland, Australia
92.	<b>Oleaceae;</b> <i>Olea eruopaea</i> L.															1(Arboretum Gaja); 5 (Other trees, Lalkuan)		6	Edible oil	Native to the Mediterranean region.
93.	<b>Salicaceae;</b> <i>Salix babylonica</i> L.		Patalhod	340											340	1(Arboretum Gaja); 16 (Sal associate experimental site, Lalkuan)		357	Timber	Native to dry areas of northern China
94.	<b>Oleaceae;</b> <i>Nyctanthes arbortristis</i> L.		Haldwani	30	Lalkuan	4	Shyampur	214	Kalsi	250					498	1(Arboretum Gaja); 100 (Riparian plot, Shyampur); 1(Sarvdharm vaatika, Haldwani); 4 (Aromatic Block); 1 (Arboretum, Haldwani) 2 Bhujiyaghat (Aromaticplants)		607	Medicinal	South Asia and Southeast Asia.

95.	<b>Tiliaceae;</b> <i>Grewia globra</i> Bl.	 Kathbhimal		Lalkuan	26										26	1(Arboretum Gaja); 7 (Miyawaki, Haldwani);2 (Arboretum, Haldwani); 250 (Sal associate experimental site, Lalkuan); 5 (Shrub species conservatory, Lalkuan)	291	Fibre	Native to Northwestern Himalayas
96.	<b>Salicaceae;</b> <i>Salix elaeagnos</i> Scop.															1(Arboretum Gaja)	1	Timber	India, Nepal, China.
97.	<b>Esalpiniaceae;</b> <i>Cassia spectabilis</i> (DC) Irwin&Barneby		Least concern (IUCN)													1(Arboretum Gaja)	1	Ornamental	Native to South and Central America
98.	<b>Anacardiaceae;</b> <i>Pleiogynium ceresiferum</i> (DC.)Leenh.															3(Arboretum Gaja)	3	Edible	Native to Malaysia, Australia and the Pacific Islands
99.	<b>Fabaceae;</b> <i>Tipauna tipu</i> (Benth.) Kuntze															1(Arboretum Gaja)	1	Timber	South American tree







100	<b>Mimoseae;</b> <i>Leuceana diversifolia</i> L.		Least concern (IUCN)													1(Arboretum Gaja)		1	Edible	Native to the Americas
101	<b>Bignoniaceae;</b> <i>Jacranda mimosifolia</i> D.Don	 Jacranda	Vulnerable (IUCN)	Kalika	1437	Dwarson	195								1632	1(Arboretum Gaja) 3 (Palmetum)		1636	Ornamental	Native to south central South America
102	<b>Apocynaceae;</b> <i>Acokanthera oppositifolia</i> (Lam.) Codd		Least concern (IUCN)													1(Arboretum Gaja)		1	Medicinal and Ornamental	Southern and Central Africa
103	<b>Mimoseae;</b> <i>Acacia stenocarpa</i> A.Rich															1(Arboretum Gaja)		1	Medicinal	Egypt to Kenya and west Senegal
104	<b>Cannabaceae;</b> <i>Trema orientalis</i> Bl.	 Banihari	Least concern (IUCN)													1(Arboretum Gaja); 41 ( Banihari conservation plot); 1 (Arboretum, Haldwani)		43	Medicinal	Native to Indian subcontinent









105	<b>Fabaceae;</b> <i>Butea monosperma</i> (Lam.)Taub	 Dhak	Data Deficient (IUCN)			Haldwani	11	Lalkuan	32						43	1(Arboretum Gaja); 100 (Riparian plot); 99 Chakferi block (Seed Orchard); 1 (Nav GrahaVaatika);1 (Nakshtra Vaatika) ; 1 (Arboretum, Haldwani); 88(Gum species experimental plot), 16 (Mixed biodiversity plot, Lalkuan); 30 (Riparian plot), Shyampur); 10 (Public Health Garden)	390	Timber	Native to subtropical, tropical and Southeast India
106	<b>Fabaceae;</b> <i>Tamarindus indica</i> L.	 Imli	Least concern (IUCN)	Haldwani	100										100	2(Arboretum Gaja); 100 Chakferi block (Seed Orchard); 2(Miyawaki, Haldwani); 1 (SarvDharmVaatika, Haldwani); 1(Arboretum, Haldwani) 5 (Public Health Garden)	211	Edible	Tropical Africa, and Madagascar.
107	<b>Rubiaceae;</b> <i>Neolamarckia cadamba</i> (Roxb.) Bosser	 Kadamb		Lalkuan	53										53	1(Arboretum Gaja);1 (Nakshtra Vaatika; 1 (SarvDharmVaatika) ; 1 (Arboretum, Haldwani)	57	Furniture making	South and Southeast Asia.
108	<b>Fabaceae;</b> <i>Saraca asoca</i>	 Seeta Ashok	Vulnerable (IUCN)	Lalkuan	11										11	1(Arboretum Gaja); 1 SarvDharmVattika, Haldwani ;1 (Panchvati, Haldwani) ;1 (Panchvati) ;3 (Arboretum, Haldwani); 7 (Ashok Vatika, Haldwani); 6 (Palmetum); 160 lantana plot kalsi); 5 (Public Health Garden)	196	Ornamental	Native to Central India and Western Ghats







109	<b>Elaeagnaceae;</b> <i>Elaeagnus latifolia</i> L.	 Loharu		Lalkuan	120										120	2(Arboretum Gaja); 14(Sal associate site, Lalkuan); 50(Medicinal Plant Conservatory Haldwani); 10 (Public Health Garden)	196	Edible and Medicinal	E. Asia, Pakistan and India.
110	<b>Caesalpiniaceae;</b> <i>Cassia fistula</i> L.	 Amaltas	Least concern (IUCN)	Lalkuan	64	Shyam pur	130	Kalika	50	Dwarson	50	Thano	100		294	1(Arboretum Gaja); 27 (Miyawaki, Haldwani); 67 (Color& tanning experimental plot,Lalkuan); 1 (Buddha park); 6 (Palmetum); 50 (Riparian plot); 5 (tower of Flowers); 5 (Public Health Garden); 6 (Dharmic van)	435	Medicinal and Ornamental.	Native to Indian subcontinent.
111	<b>Moraceae;</b> <i>Moringa oelifera</i> Lam.	 Sahjan		Lalkuan	101	Kalsi	400	Man dal	100	Bhujiyaghat	50				651	1(Arboretum Gaja); 1 (Arboretum, Haldwani); 15(Mixed biodiversity plot, Lalkuan); 5 (Public Healthn Garden)	674	Edible	Native to Indian subcontinent
112	<b>Phyllanthaceae;</b> <i>Bishchofia javanica</i> Blume.	 Paniyala		Shyam pur	25	Haldwani	134	Lalkuan	40						199	1(Arboretum Gaja); 150 (RET plot); 19 (Miyawaki, Haldwani); 69 (Color& tanning plot), 8( mixed biodiversity plot, Lalkuan)	446	Furniture making and Medicinal.	South Asia
113	<b>Magnoliaceae;</b> <i>Magnolia champaca</i> (L.) Baill.ex Pierre	 Champa	Least concern (IUCN)													1(Arboretum Gaja); 5 (Arboretum Haldwani)	6	Furniture making and Ornamental	India, Java and Philippines.
114	<b>Burseraceae;</b> <i>Garuga pinnata</i> Roxb.	 Kharpat														1(Arboretum Gaja); 100(RET plot); 5 (Pipalparao Biodiversity Plot) ;14 (Miyawaki, Haldwani); 10 (Shrub conservatory, Lalkuan)	130	Medicinal	China and Indian subcontinent.







115	<b>Ebenaceae;</b> <i>Diospyros chloroxylon</i> Roxb.	 Kala tendu	Not evaluated (IUCN)	Shyampur	25	Lalkuan	2								27	1(Arboretum Gaja); 100 (RET Plot, Shyampur); 10 (Public Healthn Garden)	138	Medicinal	Native to South India
116	<b>Euphorbiaceae;</b> <i>Putranjiva roxburghii</i> Wall.	 Putranjiva		Shyampur	5375	Kalsi	200	Lalkuan	14						5589	1(Arboretum Gaja); 100 (Riparian plot); 2(Arboretum Haldwani); 10 (Public Healthn Garden)	5702	Medicinal	Southeast Asia, Indian Subcontinent.
117	<b>Rubiaceae;</b> <i>Haldina cordifolia</i> (Roxb.) Hook.f. ex Brandis	 Haldu		Shyampur	150	Lalkuan	202								352	1(Arboretum Gaja); 7 (Miyawaki, Haldwani); 25 (HalduVaatika); 1 (Arboretum, Haldwani); 137 (Sal associate experimental plot, Lalkuan)	523	Medicinal	Sub Himalayan tracts; Western Ghats, Sri Lanka and Myanmar
118	<b>Fabaceae;</b> <i>Dalbergia sissoo</i> Roxb.	 Shisham		Lalkuan	40	Kalsi	1200								1240	2(Arboretum Gaja); 15 (Miyawaki, Haldwani); 3 (Arboretum, Haldwani); 1 (Buddha park)	1261	Timber	Sub Himalayan tracts
119	<b>Mimosaceae;</b> <i>Acacia catechu</i> Wall.	 Khair		Shyampur	956	Kalsi	2200	Jolly grant	530						3686	1 (Nav GrahaVaatika); 1 (Nakshtra Vaatika);18 (Miyawaki);11 (Arboretum, Haldwani); 5 (Public Health Garden); 39 (Riparian plot)	3743	Edible	Garhwal and Kumaon; Irawaddi valley of Pegu (Myanmar).
120	<b>Mimosaceae;</b> <i>Acacia nilotica</i> (L.) P.J.H.Hurter & Mabb.	 Babul	Least concern (IUCN)	Lalkuan	13										13	1(Arboretum Gaja); 57 (Gum species experimental plot, Lalkuan)	71	Edible, Gum and Reclamation	Africa, Middle East Asia and Indian subcontinent.

121	<b>Meliaceae;</b> <i>Melia azaderach</i> L.	 Bakain	Least concern (IUCN )	Kalsi	236	Kalika	40	Dwar son	455						731	1(Arboretum Gaja); 3(Arboretum Haldwani); 5 (Public Health Garden)	737	Timber	Southeast Asia and Northern Australia.
122	<b>Elaeocarpaceae</b> ; <i>Eleocarpus augusstifolius</i> Bl.	 Rudraksha														1(Arboretum Gaja); 2(Arboretum, Haldwani); 75 (Rudraksh Hedge Garden, Haldwani)	78	Pharmaceutical	India, Nepal and Bangladesh.
123	<b>Verbenaceae;</b> <i>Tectona grandis</i> L.	 Teak														2(Arboretum Gaja); 2(Arboretum Haldwani)	4	Timber	Central India and Myanmar
124	<b>Simaroubaceae</b> ; <i>Simarouba glauca</i> DC.	 Laxmitaru														1(Arboretum Gaja); 1(Arboretum, Haldwani)  5 (Public Healthn Garden)	7	Medicinal	Native to Florida, South America.
125	<b>Araucariaceae;</b> <i>Agathis robusta</i> Bailey	 Agathis	Least concern (IUCN )	Lalkuan	25	Kalsi	90								115	1(Arboretum Gaja); 1(Arboretum Haldwani); 3 (Lalkuan Centre)	120	Furniture making	Papua New Guinea and Queensland, Australia.
126	<b>Fabaceae;</b> <i>Gleditsia triacanthos</i> L.	 Kauri pine														1(Arboretum Gaja)	1	Varnishes and paints	Native to central North America.

127	<b>Mimosaceae;</b> <i>Albizia zygia</i> (D.C) J.F.Macbr.																1(Arboretum Gaja)		1	Medicinal	Asia, Africa, Madagascar, America and Australia.	
128	<b>Podocarpaceae;</b> <i>Podocarpus gracilior</i> (Pilg.) C.N.Page		Least concern (IUCN )														2(Arboretum Gaja)		2	Timber	Asia, Africa, Madagascar, America and Australia.	
129	<b>Santalaceae;</b> <i>Santalum album</i> L.	 Chandan	Vulnerable (IUCN )	Lalkuan	29												29	2(Arboretum Gaja); 4 (Arboretum, Haldwani); 365(Chandan experimental plot, Lalkuan)		400	Aromatic oil	Endemic to Timor Islands.
130	<b>Myrtaceae;</b> <i>Callistemon viminalis</i> Byrnes	 Cheel/ Bottlebrush																	10	Ornamental	East coast of Australia from Cape York to north east New South Wales.	
131	<b>Meliaceae;</b> <i>Dysoxylum binectariferum</i> Hook.fil.	 Achalkoot																		5	Medicinal	Sikkim, Khasi hills, Western Ghats.






132	<b>Combretaceae;</b> <i>Anogeissus acuminata</i> Wall	 Dhau														2(Arboretum Gaja)		2	Timber	Chittagon g hill tract. Upper and lower Myanmar .
133	<b>Meliaceae;</b> <i>Chukrasia velutina</i> M.Roem	 Chikrasi	Least concern (IUCN )													5(Arboretum Gaja); 6 (Palmetum); 1( Arboretum Haldwani)		12	Medicina l	India, China, Malaysia, Myanmar , Sri Lanka.
134	<b>Araucariaceae;</b> <i>Araucaria bidwilli</i> Hook		Least concern (IUCN)													4(Arboretum Gaja)		4	Edible	South east Queensla nd Australia.
135	<b>Araucariaceae;</b> <i>Araucaia cunninghami</i>															2(Arboretum Gaja)		2	Furniture making	Dry rainforest s of New South Wales and Queensla nd and in New Guinea
136	<b>Mimosaceae;</b> <i>Acacia lenticularis</i> Buch. Ham. ex Benth															1 (Arboretum Gaja)		1	Medicin al	E. Asia. India, Pakistan, Nepal.






137	<b>Pinaceae;</b> <i>Cedrus atlantica</i> (Endl.) Manetti ex Carriere		Endangered (IUCN )													1(Arboretum Gaja)		1	Timber	Native to the Atlas Mountains of Morocco
138	<b>Mimosaceae;</b> <i>Acacia confusa</i> Merr		Least concern (IUCN )													1(Arboretum Gaja)		1	Medicinal	Native to South East Asia
139	<b>Sapindaceae;</b> <i>Koelreuteria paniculata</i> Laxm.			Gaja	40										40	3(Arboretum Gaja)		43	Ornamental	Native to Eastern Asia, in China and Korea
140	<b>Fabaceae;</b> <i>Derris robusta</i> (Roxb.ex DC.) Benth	 Kathiyakoroi														1(Arboretum Gaja)		1		Native to East Himalayas
141	<b>Fabaceae;</b> <i>Ougeinia oojeinensis</i> (Roxb.) Hochreut	 Sadan		Lalkuan	48	Kalsi	350	Tangsa	50	Shyamputar	4195	Thano	2000		6643	1(Arboretum Gaja); 1 (Arboretum Haldwani); 64 (Sal associate plot, Lalkuan)		6712	Fodder and Farming tool	Native to western Himalayas
142	<b>Cupressaceae;</b> <i>Cupressus torulosa</i> D. Don ex Lamb	 Surai	Least concern (IUCN )	Patalhod	200	Tangsa	250	Sariatool	440						890	35 (Gymnosperm garden)		890	Medicinal.	Near Endemic







143	<b>Cupressaceae;</b> <i>Juniperus recurva</i> Buch. Ham. ex D. Don	 Dhoop	Least concern (IUCN)	Patalthod	145										145	105(RET demonstration plot, Harkot, Munsyari)		295	Timber and Ornamental	Indian Himalayan Region.
144	<b>Malvaceae;</b> <i>Kydia calycina</i> Roxb.	 Pula	Least Concern (IUCN)	Shyampur	400	Lalkuan	9								409	200 (Riparian plot); 104 Chakferi block (Seed Orchard); 1(Miyawaki, Haldwani); 5(Sal associate site, Lalkuan)		719	Medicinal and Timber	E. Asia southern China, Indian subcontinent, Myanmar
145	<b>Myrtaceae;</b> <i>Eucalyptus clonol</i> (K 25)	 Eucalyptus		Shyampur	12959										12959			12959	Timber	Native to Australia.
146	<b>Anacardiaceae;</b> <i>Spondias mangifera</i> Willd.	 Aamra		Shyampur	80	Lalkuan	32	Shyampur	20	Kalsi	75				207	200 (Riparian plot) ; 2 (Arboretum, Haldwani); 99(Gum & dye plot), 15 (Mixed biodiversity plot, Lalkuan); 80 lantana plot, kalsi); 5 (Public Health Garden)		608	Medicinal	Sub Himalayan tract and outer valleys upto Chenab region.
147	<b>Bixaceae</b> <i>Flacourtia cataphracta</i> Roxb. ex Willdenow	 Pachnala		Shyampur	29										29	100 (RET Plot, Shyampur); 107 Chakferi block (Seed Orchard)		236	Agricultural implements, Fruit and Edible	Tropical regions of Asia
148	<b>Cornaceae;</b> <i>Alangium lamarckii</i> Thwaites	 Ankola	Rare (ENVIS)	Shyampur	1100	Lalkuan	63								1163	1(Arboretum Haldwani); 16(Mixed biodiversity plot, Lalkuan); 10 (Shrub conservatory, Lalkuan)		1190	Timber	W.Africa, E.Asia and Tropical Australia.











149	<b>Combretaceae;</b> <i>Anogeissus latifolia</i> Wall.ex Guill & Perr.	 Bakali		Shyam pur	595	Lalkuan	4								599	200 (Riparian plot); 100 (Gum species plot), 13(mixed biodiversity plot, Lalkuan)		912	Medicinal	India, Nepal, Myanmar and Sri Lanka.
150	<b>Fabaceae;</b> <i>Pterocarpus marsupium</i> Roxb.	 Bijasal	Vulnerable (IUCN )	Shyam pur	110	Lalkuan	5								115	100 ( RET plot, Shyampur ); 8 Pipalparao (Mixed Biodiversity Plot); 14 (Miyawaki, Haldwani); 3 (Arboretum, Haldwani); 14 (Mixed biodiversity plot, Lalkuan)		254	Medicinal	Central and south India , South east Corner of Kumaon.
151	<b>Sapotaceae;</b> <i>Madhuca longifolia</i> (Koenig) MacBride.	 Mahua		Shyam pur	141	Lalkuan	75								216	100 ( RET plot, Shyampur ); 1 (Arboretum, Haldwani); 1 (NakshtraVaatika, Haldwani); 8 Pipalparao (Mixed Biodiversity Plot) 70(Color& tanning experimental plot, Lalkuan); 5 (Public Health Garden)		396	Medicinal	Himalayan foothills from the river Ravi to Kumaon, and southwards to Central India.
152	<b>Rhizophoraceae;</b> <i>Carallia integerrima</i> DC.	 Varangu														414 (RET plot, Shyampur); 15 Pipalparao (Mixed Biodiversity Plot); 1 (Arboretum, Haldwani)		430	Medicinal and Fodder	Australia, Malaysia, Indochina; Western Ghats.
153	<b>Burseraceae;</b> <i>Boswellia serrata</i> Roxb.	 Salaai guggal		Lalkuan	102										102	100 ( RET plot, Shyampur); 106 (Gum species plot), 8 (Mixed biodiversity plot, Lalkuan); 5 (Public Health Garden)		321	Medicinal and Gum	Sub Himalayan tract.

154	<b>Annonaceae;</b> <i>Miliusa velutina</i> H.f. & Thoum.	 Domsal	Not Evaluated (Indian Biodiversity Board)													150 ( RET plot, Shyampur ); 12 Pipalparao (Mixed Biodiversity Plot); 8 (Miyawaki, Haldwani);7 (Sal associate site, Lalkuan)	167	Medicina 1	Sub Himalaya n tract, Central India.
155	<b>Lauraceae;</b> <i>Litsea chinensis</i> Lam.	 Maida lakdi														20 ( RET plot, Shyampur ); 1(Arboretum, Haldwani)	21	Medicina 1	Sub Himalayan tract, Bengal, and South India
156	<b>Ebenaceae;</b> <i>Diospyros cordofolia</i> Roxb.	 Vish tendu		Lalku an	20											100 ( RET plot, Shyampur ); 16(Miyawaki); 1(Arboretum, Haldwani);31 (Sal associate site, Lalkuan); 10 (Public Health Garden)	178	Medicina 1	Sub Himalaya n tract, from the Ravi Eastward s
157	<b>Anacardiaceae;</b> <i>Semecarpus anacardium</i> L.f.	 Bhilawa	Not evaluated (Indian Biodiversity board)	Lalku an	129											20 ( RET plot, Shyampur ); 9 (Miyawaki, Haldwani); 4 (Pipalparao Mixed Biodiversity Plot); 82 (Color&tanninplot Lalkuan), 12 ( Sal associate site, Lalkuan)	256	Medicina 1	Sub Himalaya n tracts, Assam, Khasi hills.
158	<b>Loganiaceae;</b> <i>Strychnos nux-vomica</i> L.	 Kulicha		Lalku an	9											20 ( RET plot, Shyampur ); 1 (Nakshtra Vaatika, Haldwani); 1(Arboretum, Haldwani); 8(Mixed biodiversity plot, Lalkuan); 15 (Public Health Garden)	44	Medicina 1	Western peninsula , lower and upper Myanmar

159	<b>Rubiaceae;</b> <i>Mitragyna parvifolia</i> (Roxb.)Korth	 Faldu		Lalkuan	85										85	150( RET plot, Shyampur ); 1(Arboretum Haldwani); 16(Sal associate experimental site, Lalkuan)		252	Medicinal	India and Sri lanka
160	<b>Caesalpiniaceae;</b> <i>Bauhinia malabarica</i> Roxb.	 Mallbar bauhinia														200 (Riparian plot ); 16(Sal associate experimental site, Lalkuan)		216	Medicinal	Sub Himalayan tracts and southern parts of India.
161	<b>Oxalidaceae;</b> <i>Averrhoa carambola</i> L.	 Karmal														1 (Arboretum, Haldwani)		1	Edible and Medicinal	Native to Southeast Asia
162	<b>Anacardiaceae;</b> <i>Buchanania lanzan</i> Spreng.	 Chironji		Lalkuan	1										1	2 (Arboretum, Haldwani); 12(Mixed biodiversity plot, Lalkuan); 5 (Public Healthn Garden)		20	Edible	Northwest India
163	<b>Capparaceae;</b> <i>Crateva nurvala</i> Buch. Ham.	 Barna														1 (Arboretum, Haldwani); 5 (Public Healthn Garden)		6	Medicinal	Sub Himalayan tracts; Tamil Nadu, Kerala.

164	<b>Rutaceae;</b> <i>Citrus medica</i> L.	 Nimboo														1 (Arboretum, Haldwani) 10 (Food Forest Plot)	11	Edible	China	
165	<b>Ebenaceae;</b> <i>Diospyros malabarica</i> (Desr.)Kostel	 Gaub														1 (Arboretum, Haldwani)	1	Medicinal	Indian Subcontinent and SW.Asia	
166	<b>Ebenaceae;</b> <i>Diospyros melanoxylon</i> Roxb.	 Tendu														15(Miyawaki, Haldwani); 1(Arboretum, Haldwani); 10 (Public Healthn Garden)	26	Medicinal	Central India and Western Peninsula	
167	<b>Tiliaceae;</b> <i>Elaeocarpus serratus</i> L.	 Bhadraksh	Lalkuan	3												3	1(Arboretum, Haldwani)	4	Medicinal	Western ghats
168	<b>Rubiaceae;</b> <i>Gardenia turgida</i> Roxb.	 Thanela	Shyampur	470	Lalkuan	4										474	23 (Pipalparao (Mixed Biodiversity Plot); 3 (Arboretum, Haldwani); 16(Mixed biodiversity plot, Lalkuan)	516	Medicinal	Sub Himalayan tracts
169	<b>Bignoniaceae;</b> <i>Kigelia africana</i> (Lam.) Benth	 Balamkheera	Lalkuan	6												6	2(Arboretum, Haldwani); 10 (Public Healthn Garden)	18	Medicinal	Tropical Africa ; Eritrea and India






170	<b>Lythraceae;</b> <i>Lagerstroemia speciosa</i> L.															1 (Arboretum, Haldwani); 6 (Palmetum)	7	Timber and Medicinal.	South Asia
171	<b>Lauraceae;</b> <i>Litsea glutinosa</i> (Lour.)C.B.Rob.			Lalkuan	34										34	96 (Chakferi block Seed Orchard, Haldwani); 8 (Miyawaki, Haldwani); 70(Color&tanning experimental plot, Lalkuan) 16(mixed biodiversity plot, Lalkuan)	224	Timber and Medicinal	India; South China, Malaysia.
172	<b>Fabaceae;</b> <i>Pterocarpus santalinus</i> L.		Near threatened (IUCN)													1 (Arboretum, Haldwani); 2(Mix biodiversity plot, Lalkuan) 5 (Public Health Garden)	8	Musical Instruments, Medicinal and Food colouring agent	Dry hills of the eastern Deccan from the Godawari to the Palar river
173	<b>Lauraceae;</b> <i>Persea americana</i> Mill.															1 (Arboretum, Haldwani) 10 (Food Forest Plot)	11	Edible	South central Mexico
174	<b>Malvaceae;</b> <i>Thespesia populnea</i> Correa.															1 (Arboretum, Haldwani)	1	Medicinal	Western Ghats; Myanmar






175	<b>Verbenaceae;</b> <i>Vitex pinnata</i> L.	 Ahoi	Least concern (IUCN)												1 (Arboretum, Haldwani)		1	Medicinal, Fuel wood and Timber	South east asia
176	<b>Dipterocarpaceae;</b> <i>Shorea robusta</i> Roth	 Sal	Least concern (IUCN)												1 (Nakshtra Vaatika, Haldwani); 2 (Arboretum, Haldwani); 1(Buddha vaatika)		4	Timber and Medicinal	Indian Subcontinent
177	<b>Ulmaceae;</b> <i>Holoptelea integrifolia</i> (Roxb.)Planch	 Kanju		Shyam pur	1950									1950	13 (Arboretum, Haldwani) ; 2 (Miyawaki, Haldwani)		1965	Medicinal	Indian subcontinent, Indo China and Myanmar
178	<b>Meliaceae;</b> <i>Melia composita</i> Wall.		Least Concern (IUCN)	Lalkuan	544									544	1050 PipalParao (Progeny Trial); 300 Pipalparao (Spacing trial); 300 Chakferi block (Progeny trial); 1000 Tanda block (Progeny Trial); 106(Sal associate experimental plot, Lalkuan)		3324	Fuel wood, Timber Insecticide and Land reclamation	Tropical regions of Asia and India.
179	<b>Fabaceae;</b> <i>Dalbergia latifolia</i> Roxb,	 Kala Shisam	Vulnerable (IUCN)												594 Pipalparao (Suitability trial); 1 Arboretum, Haldwani; 940 (Kala Shishamexperimental plot, Lalkuan)		1535	Timber	Southeast India
180	<b>Bombacaceae;</b> <i>Bombax ceiba</i> L.			Lalkuan	3									3	96 Chakferi block (Seed Orchard); 11 (Miyawaki, Haldwani); 10 (Arboretum, Haldwani);		125	Edible Medicinal and Timber	India, Myanmar and Sri Lanka.






187	<b>Anacardiaceae;</b> <i>Mangifera indica</i> L.	 Aam	Data deficient (IUCN)	Lalkuan	11	Kalsi		40							51	1 (Nakshtra Vaatika; 1 (Sarv Dharm Vaatika); 1 (Buddha Vaatika) 1 (Arboretum, Haldwani); 10 (Food Forest Lalkuan)		65	Edible, Medicinal, Timber and Fuelwood	Indian subcontinent.
188	<b>Musaceae;</b> <i>Musa paradisiaca</i> L.	 Banana														1 (Sarv Dharm Vaatika); 10 (Food Forest Lalkuan)		11	Edible Mythological and Medicinal.	
189	<b>Mimosaceae;</b> <i>Albizia lebbek</i> Benth.	 Siras														1 (Arboretum Haldwani)		1	Fodder and Fuelwood	Indian subcontinent.
190	<b>Myrsinaceae;</b> <i>Ardisia solanacea</i> Roxb.	 Makhmal		Lalkuan	5										5	8 (Miyawaki, Haldwani); 17 (Sal associate experimental plot, Lalkuan)		30	Edible and Medicinal	Sub Himalayan tracts from Jammu upto eastwards in Assam, Khasi hills.
191	<b>Apocynaceae;</b> <i>Wrightia tinctoria</i> R.Br	 Dudhi		Lalkuan	13										13	20 (Miyawaki, Haldwani); 16 (Mixed biodiversity plot, Lalkuan)		49	Edible Medicinal and Timber	Central India and Western peninsula
192	<b>Lythraceae;</b> <i>Lagerstroemia parviflora</i> Roxb.	 Dhodi		Lalkuan	88										88	1 (Arboretum Haldwani); 69 (Color & tanning experimental plot, Lalkuan)		158	Timber	Sub Himalayan tracts, Assam and lower Bengal.
193	<b>Bignoniaceae;</b> <i>Tabebuia rosea</i> DC.	 Basant Rani	Least Concern (IUCN)													16 (Mixed biodiversity plot, Lalkuan)		16	Medicinal	Native to S. America from Argentina north through Central America to Mexico.








194	<b>Apocynaceae;</b> <i>Alstonia scholaris</i> (L.)R. Br.	 Chitvan	Least Concern (IUCN)														1(Arboretum Haldwani) 4 (Tower of Flowers); 5 (Public Health Garden)	10	Medicinal	Native to India
195	<b>Euphorbiaceae</b> ; <i>Mallotus philippensis</i> Muell.Arg.	 Rohini		Lalkuan	9	Shyampur	80	Kalsi	500							589	1(Arboretum Haldwani); 10(Colour &Tannin Plot, Lalkuan)	600	Timber and Medicinal	Indian subcontinent.
196	<b>Capparaceae;</b> <i>Crataeva religiosa</i> Forst.	 Veruna		Lalkuan	225											225	16(Mixed biodiversity plot, Lalkuan)	241	Medicinal	Peninsular India, Western India, Gangetic Plains and Eastern India up to Tripura and Manipur.
197	<b>Euphorbiaceae;</b> <i>Croton tiglium</i> L.	 Jamal gota	Least Concern (IUCN)														1 ( Arboratum, Haldwani) 4 (Mix biodiversity plot, Lalkuan); 15 (Public Health Garden)	20	Medicinal	Indian subcontinent.
198	<b>Salicaceae;</b> <i>Xylosma longifolium</i> Clos.	 Dandal		Kalsi	200												15(Sal associate experimental site, Lalkuan)	215	Medicinal and Edible	India and Pakistan.








199	<b>Bombacaceae;</b> <i>Ceiba pentandra</i> (L.) Gaertn.		Least Concern (IUCN)												16(Mixed biodiversity plot, Lalkuan)	16	Medicinal	Native to South America
200	<b>Meliaceae;</b> <i>Swietenia mahagoni</i>		Near threatened (IUCN)												1(Sal associate experimental site, Lalkuan); 500 (Mahogany plot)	501	Medicinal	Native to Southern Mexico to Peru and Brazil.
201	<b>Sterculiaceae;</b> <i>Sterculia alata</i> Roxb.														8(Mixed biodiversity plot, Lalkuan)	8	Medicinal and Ornamental	Tista Valley, Sikkim and lower Myanmar
202	<b>Salvadoraceae;</b> <i>Salvadora persica</i> L.		Least Concern (IUCN)	Lalkuan	7										12(Sal associate experimental site)	19	Medicinal	India (Aravali hills )
203	<b>Burseraceae;</b> <i>Garuga pinnata</i> Roxb.														93(Sal associate experimental plot, Lalkuan)	195	Medicinal	Indian subcontinent.







204	<b>Moraceae;</b> <i>Artocarpus lacucha</i> Roxb.			Lalkuan	3										3	8 (Sal associate experimental site, Lalkuan)		11	Medicinal and Edible	Indian subcontinent.
205	<b>Bignoniaceae;</b> <i>Tecomella undulata</i> G. Don															1 (Sal associate experimental site, Lalkuan)		1	Medicinal	Shivalik tracts and Baluchistan
206	<b>Bignoniaceae;</b> <i>Radermachera xylocarpa</i> K.Schum.															4 (Sal associate experimental site, Lalkuan)		4	Ornamental	Endemic (India)
207	<b>Caesalpinaceae;</b> <i>Peltophorum pterocarpum</i> (D.C) K.Heyne															2 (Sal associate experimental site, Lalkuan)		2	Ornamental	Indian subcontinent
208	<b>Tiliaceae;</b> <i>Grewia tenax</i> Fiori			Lalkuan	42										42	4 (Sal associate experimental site, Lalkuan)		46	Medicinal	Indian subcontinent
209	<b>Burseraceae;</b> <i>Bursera microphylla</i> Gray		Least Concern (IUCN)													4 (Sal associate experimental plot, Lalkuan)		4	Medicinal	Mexico

210	<b>Sapotaceae;</b> <i>Manilkara hexandra</i> (Roxb.)Dubard	 Khirmi															3(Sal associate experimental site)		3	Medicinal	Indian subcontinent.	
211	<b>Combretaceae;</b> <i>Terminalia arjuna</i> Wight et Arn.	 Arjun		Lalkuan	60												60	1 (Buddha vaatika); 10 (Public Health Garden)		71	Medicinal	Central, North and South India, Sri Lanka.
212	<b>Apocynaceae;</b> <i>Holarrhena anrtidysenterica</i> (L.)R.Br.	 Kutuj		Lalkuan	40												40			40	Medicinal	Indian subcontinent.
213	<b>Meliaceae;</b> <i>Toona ciliata</i> M. Roem.	 Tun	Least Concern (IUCN)	Lalkuan	10	Kalika	50	Tangsa	500	Kalsi	80	Gaja	1960	Sariatal	220	2820			2820	Timber and Host to Orchid species	Sub Himalaya tracts, Western and Eastern Ghats, Nepal and Myanmar	
214	<b>Mimosaceae;</b> <i>Leucaena leucocephala</i> (Lam.)de Wit	 Subabul		Lalkuan	10												10			10	Fodder and Timber	Tropical and subtropical North America.
215	<b>Caesalpiniaee;</b> <i>Cassia siamea</i> (Lam.) Irwin et Barneby	 Kassod	Least Concern (IUCN)	Lalkuan	5												5			5	Fodder	South and Southeast Asia.

216	<b>Fabaceae;</b> <i>Pithecellobium dulce</i> (Roxb.) Benth.		Least Concern (IUCN )	Lalkuan	35										35			35	Medicinal	Native to Mexico
217	<b>Myrtaceae;</b> <i>Eucalyptus citriodora</i> K.D.Hill & L.A.S. John.		Least Concern (IUCN)	Lalkuan	39										39	5 (Gum Plot, Lalkuan)		44	Medicinal and Perfumery	Temperate and tropical north eastern Australia.
218	<b>Mimosaceae;</b> <i>Acacia senegal</i> (L.)Br.			Lalkuan	18										18	102 Gum species experimental plot		120	Gum	West coast of India; Pakistan.
219	<b>Anacardiaceae;</b> <i>Lannea coromandalica</i> (Houtt.)Merr.			Lalkuan	59										59	99 (Gum & dye experimental plot, Lalkuan); 15 (Mixed biodiversity plot)		173	Gum and Dye	South and Southeast Asia, Sri Lanka and Southern China.
220	<b>Myrtaceae;</b> <i>Syzygium aromaticum</i> (L.)Merr.& L.M.Perry															5(Aromatic species project site, Lalkuan)		5	Spice and Medicinal	Native to the Maluku Islands (Moluccas) in Indonesia.

221	<b>Ulmaceae;</b> <i>Trema politoria</i> (Planch.) Blume	 Indian charcoal		Lalkuan	35										35			35	Medicinal and Charcoal	Nepal, Bhutan, China, Myanmar and Vietnam
222	<b>Dipterocarpaceae;</b> <i>Dipterocarpus retusus</i> Blume	 Hollong	Endangered (IUCN)													1 (Bharat Vatika, Haldwani)		1	Plywood Industries	Assam and Arunchal Pradesh; China, Vietnam, Indonesia, Myanmar
223	<b>Pinaceae;</b> <i>Abies spectabilis</i> (D.Don) Mirb.		Near Threatened (IUCN)	Mandal	300	Patalthod	175								475	Natural Regeneration study, Munsyari 30 (Gymnosperm garden, Raditop)		505	Medicinal	India Pakistan and Nepal
224	<b>Salicaceae;</b> <i>Poplar sp.</i>															Numerous (Lalkuan)			Timber	
225	<b>Myrtaceae;</b> <i>Eucalyptus sp</i>															Numerous (Lalkuan, Haldwani)			Timber and Paper	
226	<b>Boraginaceae;</b> <i>Ehretia laevis</i> Roxb.	 Chamror		Kalsi	195	Shyam pur	50	Lalkuan	15						260	50(River range Kalsi); 100 (Riparian plot); 53 (Miyawaki Haldwani); 1 (Arboretum, Haldwani); 400 approx. (Mixed biodiversity plot, Lalkuan); 195( lantana plot kalsi); 20 (riparian plot, Haridwar)		1079 approx	Medicinal	China, Bhutan, India, Pakistan and Vietnam.

227	<b>Salicaceae;</b> <i>Flacourtia ramontchi</i> L'Herit	 Indian plum		Kalsi	05										05	5 Pipalparao (Mixed Biodiversity Plot ); 2 (Arboretum, Haldwani); 16 (Mixed biodiversity plot, Lalkuan)		28	Edible	Asian continent.
228	<b>Moraceae;</b> <i>Streblus asper</i> Laur.	 Dahiya	Least concern (IUCN)	Shyam pur	1287	Kalsi	25	Lalkuan	3	Jolly grant	1200				2515	50(Riparian plot); 9 (Miyawaki, Haldwani) 1 (Arboretum, Haldwani); 16 (Mixed biodiversity plot, Lalkuan); 50 (Riparian plot)		2641	Medicinal	India, Sri Lanka, Thailand, Malaysia and Indonesia .
229	<b>Rhamnaceae;</b> <i>Zizyphus jujuba</i> Lam.	 Red date		Shyam pur	230	Kalsi	360								590			590	Edible	India and Myanmar
230	<b>Bixaceae;</b> <i>Bixa orellana</i> L.	 Sindoori	Least Concern (IUCN )			Lalkuan	44	Shyam pur	40						84	2(Arboretum, Haldwani); 69 (Color and tannin experimental plot, Lalkuan); 50 lantana plot kalsi, 20 RET plot); 10 (Public Health Garden)		235	Dyeing agent	Native to a region between northern South America and Mexico .
231	<b>Rutaceae;</b> <i>Acronychia pedunculata</i> (L.) Miq.	 Asper		Shyam pur	50										50			50	Edible and medicinal	Tropical regions of Asia.
232	<b>Fabaceae;</b> <i>Hardwickia binata</i> Roxb.	 Anjan														40 approx (Sal associate experimental site, Lalkuan)		40	Making agricultural equipment	E. Asia and southern India.
233	<b>Pandanaceae;</b> <i>Pandanus fascicularis</i>	 Kewada	Least Concern (IUCN)													4(Aromatic species project site, Lalkuan); 3 (Haldwani range)		7	Medicinal and food flavoring.	South Asia, southern India and Myanmar








234	<b>Fabaceae;</b> <i>Pterocarpus dalbergioides</i>	 Padauk	Data Deficient (IUCN)	Lalkuan	100										100	1 ( State trees of India); 170 (Padauk suitability plot, Lalkuan)	271	Medicinal	Native range is Andaman Islands
235	<b>Moraceae;</b> <i>Artocarpus incisa</i>	 Breadfruit														1 ( State trees of India)	1	Edible and Medicinal	Native to the Pacific islands
236	<b>Thymelaceae;</b> <i>Aquillaria agallocha</i>		Critically endangered (IUCN)													1 ( State trees of India)	1	Medicinal	Native to southeast Asia
237	<b>Styracaceae;</b> <i>Styrax benzoin</i> Dryand.	 Loban tree														4 (Other trees, Lalkuan)	4	Medicinal and resin	Sumatra in Indonesia
238	<b>Euphorbiaceae</b> ; <i>Sapium sebiferum L.</i>	 Makhan charbi		Dwarson	50	Patalhod	10								60	1(Arboretum Gaja);43 (Miyawaki Experiment)	10	Used in Manufacturing candles and making soaps	Native to China
239	<b>Burseraceae;</b> <i>Guggal commiphora</i>	 Indian bdellium tree		Lalkuan	10										10		10	Aromatic and Medicinal	Native to India













240	<b>Annonaceae;</b> <i>Annona reticulata</i>	 Bullock's Heart		Hald wani	5											1 Ramayan Vaaatika		6	Edible and Medicinal	Native to Mexico, Central America, and South America
241	<b>Annonaceae;</b> <i>Annona muricata</i>	 Soursop		Hald wani	5											1 Ramayan Vaaatika		6	Edible and Medicinal	Native to Central and tropical South America
242	<b>Bignoniaceae;</b> <i>Millingtonia hortensis</i>	 Indian cork tree		Hald wani	6										6	5 (Tower of Flowers)		11	Ornamental	Native to South Asia & South East Asia
243	<b>Apocynaceae;</b> <i>Calotropis gigantea</i>	 Crown Flower		Lalkuan	5										5	5 (Public Health Garden)		10	Medicinal	Native to Indian Sub Continent
244	<b>Simaroubaceae</b> ; <i>Ailanthus excelsa</i>	 Tree of Heaven		Hald wani	5										5			5	Medicinal	Found in India and Sri Lanka
245	<b>Euphorbiaceae</b> ; <i>Jatropha curcas</i>	 Barbados nut		Hald wani	6										6			6	Medicinal	Native to Mexico and Central America
246	<b>Fabaceae;</b> <i>Acacia leucophloea</i>	 Reonja		Hald wani	6										6			6	Edible and Medicinal	Native to Southeast Asia







247	<b>Fabaceae;</b> <i>Acacia auriculiformis</i>	 Northern black wattle															8 (Pollinator Park)		8	Ornamental and Furniture making	Native to Australia, Indonesia, and Papua New Guinea.
248	<b>Sapindaceae;</b> <i>Aesculus assamica</i>	 East Himalayan Horse Chestnut		Hald wani	6														6	Ornamental	Native to India
249	<b>Lecythidaceae;</b> <i>Barringtonia acutangula</i>	 Freshwater Mangrove		Hald wani	10														10	Edible and Medicinal	Native to Southern Asia
250	<b>Fabaceae;</b> <i>Cassia javanica</i>	 Pink shower		Hald wani	10														10	Medicinal and Timber	Native to Southeast Asia
251	<b>Myrtaceae;</b> <i>Corymbia citriodora</i>	 Spotted gum		Hald wani	10														10	Aromatic and Medicinal	Endemic to north eastern Australia.
252	<b>Fabaceae;</b> <i>Erythrina crista galli</i>	 Cockspur coral tree		Hald wani	10														10	Medicinal	Native to Argentina, Uruguay, southern Brazil and Paraguay.
253	<b>Podocarpaceae</b> <i>Podocarpus macrophyllus</i>	 Buddhist pine		Hald wani	10														10	Ornamental	Native to Southern Japan

254	<b>Sterculiaceae;</b> <i>Pterygota alata</i>	 Buddha Coconut		Hald wani	10												10	Medicinal	Native to Indian Subcontinent
255	<b>Cupressaceae;</b> <i>Taxodium distichum</i>	 Bald cypress		Hald wani	10												10	Timber and Medicinal	Native to Southeastern United States
256	<b>Salicaceae;</b> <i>Populus deltoides</i>	 Eastern cottonwood		Hald wani	10												10	Timber	Native to North America
257	<b>Caesalpinaceae;</b> <i>Peltophorum ferrugineum</i>	 Copperpod		Hald wani	10												10	Ornamental and Fodder	Native to tropical southeastern Asia
258	<b>Euphorbiaceae;</b> <i>Trewia nudiflora</i>	 False White Teak		Hald wani	10												10	Ornamental	Native to Indian Subcontinent
259	<b>Calophyllaceae;</b> <i>Mammea suriga</i>	 Surangi		Hald wani	10								10 (Aromatic Garden, Lalkuan)				20	Aromatic	Endemic to Western Ghats
260	<b>Dipterocarpaceae;</b> <i>Vateria indica</i>	 White dammar	Vulnerable (IUCN); Critically Endangered (Indian Biodiversity Portal),	Hald wani	10												10	Medicinal, Furniture making and Source of resin	Endemic to Western Ghats

261	<b>Clusiaceae;</b> <i>Garcinia indica</i>	 Kokum		Hald wani	10												10	Ornamental and Edible	Native to India	
262	<b>Dipterocarpaceae;</b> <i>Hopea wightiana</i>	 Pav	Endangered (IUCN)	Hald wani	10												10	Timber and Fuelwood	Endemic to the Western Ghats	
263	<b>Myrtaceae;</b> <i>Syzygium samarangense</i>	 Chambakka		Hald wani	10										5 (Public Healthn Garden)		15	Edible and Aromatic	Natuveto Malay Peninsula	
264	<b>Myrtaceae;</b> <i>Syzygium hemisphericum</i>	 Bhedas		Hald wani	10												10	Medicinal	Native to India	
265	<b>Rutaceae;</b> <i>Citrus limetta</i>	 Mosami		Hald wani	10										10 (Food Forest Plot)		20	Edible	Native to southern regions of Iran	
266	<b>Cupressaceae;</b> <i>Cunninghamia lanceolata</i> (Lamb) Hook		Least concern (as per IUCN)	Kalika	2	Dwarson	4								6	30 (Gymnosperm garden)		6	Ornamental	Native to China
267	<b>Sapindaceae;</b> <i>Aesculus indica</i>	 Pangar		Kalika	341	Dwarson	596	Man dal	100	Gaja	2812				3849	1 (Arboretum at Gaja); 5 Saritatal ( Medicinal beds)		3855	Medicinal	Near Endemic

268	<b>Myricaceae;</b> <i>Myrica sapida</i>	 Shillong kaphal														363 (Dwarson block)		363	Fuelwood and fodder	Near Endemic
269	<b>Euphorbiaceae</b> : <i>Mallotus nudiflorus</i>	 Gutel														30 ( Riparian plot )		30	Medicinal	Indian Subcontinent, SE Asia
270	<b>Anacardiaceae</b> ; <i>Anacardium occidentale</i>	 Kaju														1 (Arboretum, Haldwani)		1	Edible	Tropical America
271	<b>Fabaceae;</b> <i>Adenanthera pavonina</i>	 Red Sandalwood		Haldwani	5											5		5	Edible and Medicinal	Ntve to America
272	<b>Acanthaceae;</b> <i>Adhatoda beddomei</i>	 Malabar nut		Haldwani	5											5		5	Medicinal	Indian subcontinent
273	<b>Oxalidaceae;</b> <i>Averrhoa bilimbi</i>	 Bilimbi		Haldwani	5											5		5	Medicinal	Native to Malaysia and Indonesia
274	<b>Euphoiaceae ;</b> <i>Baccaurea courtallensis</i>			Haldwani	5											5		5	Medicinal	Endemic to Southern Western Ghats






275	<b>Caesalpinieae ; <i>Brownea coccinea</i></b>	 Scarlet Flame Bean	Hald wani	5											5			5	Medicia 1	Native to America
276	<b>Myrtaceae; <i>Eugenia uniflora</i></b>	 Suriname cherry	Hald wani	5											5			5	Medicia 1	Native to tropical South America's east coast
277	<b>Malpighiaceae; <i>Malpighia glabra</i></b>	 Wild crapemyrtle	Hald wani	5											5			5	Medicia 1	Native to south Texas south through Mexico, Central America, and the Caribbean to South America as far as Peru and Brazil.
278	<b>Sterculiaceae ; <i>Pterospermum rubiginosum</i></b>	 Rusty Kanak Champa	Hald wani	5											5			5	Medicia 1	Endemic to Southern Western Ghats
279	<b>Simaroubaceae ; <i>Quassia amara</i></b>	 Bitter-wood	Hald wani	5											5			5	Medicia 1	Native in the tropics of Southern America

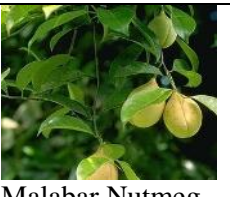
280	<b>Simaroubaceae</b> ; <i>Quassia indica</i>			Hald wani	5										5			5	Medicinal	Native to India, Myanmar and Sri Lanka.
281	<b>Bignoniaceae;</b> <i>Stereospermum colais</i>	 Yellow Snake Tree		Hald wani	5										5			5	Medicinal	Native to India, Myanmar and Sri Lanka.
282	<b>Lecythidaceae</b> ; <i>Barringtonia racemosa</i>	 Powder-puff tree		Hald wani	5										5			5	Medicinal	East Africa to West Pacific
283	<b>Anacardiaceae</b> ; <i>Buchanania lanceolata</i>			Hald wani	5										5			5	Medicinal	Endemic to India.
284	<b>Ebenaceae;</b> <i>Diospyros ebenum</i>	 Ceylon ebony		Hald wani	5										5			5	Medicinal	Native to India, Sri Lanka and Indonesia
285	<b>Phyllanthaceae</b> ; <i>Phyllanthus myrtifolius</i>	 Mousetail plant		Hald wani	5										5			5	Medicinal and Ornamental	Native to SW India and Sri Lanka.
286	<b>Bignoniaceae;</b> <i>Tabebuia pentaphylla</i>	 Rosy trumpet tree		Hald wani	5	Lalkuan	20								25			25	Ornamental	Native to Central and South America

287	<b>Rubiaceae;</b> <i>Hamelia patens</i>	 Texas firebush		Hald wani	5										5			5	Medicinal and Ornamental	Native to the American subtropics and tropics.
288	<b>Fabaceae;</b> <i>Peltophorum pterocarpum</i> (DC.) Backer ex K.Heyne	 Yellow flametree														4 (Other trees, Lalkuan)		4	Ornamental tree	Native to tropical southeastern Asia
289	<b>Fabaceae;</b> <i>Paraserianthes lophantha</i> (Vent.) I.C.Nielsen.	 Brush wattle														4 (Tower of Flowers)		4	Ornamental	Exotic
290	<b>Lecythidaceae;</b> <i>Couroupita guianensis</i>	 Cannon Ball Tree		Lalkuan	5										5	25 (Aromatic Blocks)		30	Medicinal/Aromatic	It is native to the tropical forests of Central and South America.
291	<b>Urteaceae;</b> <i>Debregeasia velutina</i>	 Tusyari		Dwarson	250										250			250	Medicinal	Native to Asia
292	<b>Oleaceae;</b> <i>Olea europaea</i> L.	 Brown Olive														5 (Other trees, Lalkuan) 4 (Aromatic Project Site), 5 (Public Health Garden)		14	Medicinal & edible oil	Mediterranean Europe, Asia, and Africa
293	<b>Fabaceae;</b> <i>Erythrina variegata</i> L.	 Indian coral tree	Least Concern (IUCN)													3 (Other trees, Lalkuan)		3	Ornamental tree	Native to tropical and subtropical regions of eastern Africa,














299	<b>Lythraceae;</b> <i>Lagerstroemia indica</i> L.	 Sawani														6 (Tower of Flowers)		6	Medicinal & Ornamental	Native to Indian subcontinent
300	<b>Magnoliaceae;</b> <i>Michelia champaca</i> L.	 Champa														4 Tower of Flowers		4	Medicinal & Ornamental	Native to Indian subcontinent
301	<b>Meliaceae;</b> <i>Chukrasia tabularis</i> A.Juss.	 Chukrasia														4 Tower of Flowers		4	Medicinal & Ornamental	Native to Indian subcontinent
302	<b>Goodeniaceae;</b> <i>Scaevola sericea</i> Forst. fil.		Lalkuan	5												5		5	Medicinal	Found in coastal locations in the tropical areas of the Indo-Pacific.
303	<b>Myristicaceae;</b> <i>Myristica fragrans</i> Houtt.	 Nutmeg	Lalkuan	5												5	3 (Aromatic Project Site, Lalkuan)	8	Medicinal	Native of Moluccas, or Spice Islands, in the Indonesian Archipelago.

304	<b>Thymelaeaceae</b> ; <i>Aquilaria malaccensis</i> Lam.	 Agar Wood	Critically endangered (IUCN)	Lalkuan	65	Bhujiy aghat	250								315	210 (Agarwood Conservation Plot); 10 (Aromatic Garden, Lalkuan)		535	Medicinal/Aromatic	Found in Bangladesh, Bhutan, India, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, and Thailand.
305	<b>Rubiaceae</b> ; <i>Gardenia latifolia</i>	 Papda														8(Aromatic Project Site, Lalkuan)		8	Medicinal/Aromatic	It is found in the forests of Madhya Pradesh in India.
306	<b>Caesalpiniaceae</b> ; <i>Bauhinia tomentosa</i>	 Yellow Orchid Tree		Lalkuan	5										5			5	Medicinal	It is found in South Africa, Mozambique, Tropical Africa, India, and Sri Lanka.
307	<b>Sterculiaceae</b> ; <i>Sterculia urens</i>	 Ghost tree		Lalkuan	1											5 Gum species experimental plot, Lalkuan		6	Medicinal/Cosmetics and Food	Native to India
308	<b>Myristicaceae</b> ; <i>Myristica malabarica</i>	 Malabar Nutmeg	Vulnerable (IUCN)													2 (Aromatic Project Site, Lalkuan)		2	Medicinal	Endemic to Western Ghats in southwest India.
309	<b>Lauraceae</b> <i>Cinnamomum verum</i>	 Dalchini														5 Sarital (wild spices); 10 (Public Health Garden)		15	spice	Native to Sri Lanka

310	<b>Ericaceae;</b> <i>Lyonia ovalifolia</i> (Wall.) Drude	 Anyar		Mandal	300	Tangsa	100	Patalthod	100	Saria taal	15	Deoban	100			615			615	Medicinal	Himalaya
311	<b>Symplocaceae;</b> <i>Symplocos chinensis</i> (Lour.) Druce	 Lodh				Tangsa	50	Saria taal	6							56			56	Medicinal	Himalaya
312	<b>Aquifoliaceae:</b> <i>Ilex dipyrrena</i>	 Himalayan holy						Devvan	25							25			25		
313	<b>Annonaceae;</b> <i>Annona squamosa</i>	 Sharifa		Kalsi	150											150	5 (Public Health Garden)		155	Medicinal	Indigenous to tropical South America and the West Indies
314	<b>Pistaceaceae;</b> <i>Pistacia integerrima</i>	 Kaakarasingi															5 (Public Health Garden)		5	Medicinal	Native to Asia
315	<b>Annonaceae;</b> <i>Cananga odorata</i>	 Ylang ylang															10 (Aromatic Project Site)		10		Native to parts of Thailand and Vietnam






316	<b>Sapindaceae;</b> <i>Litchi chinensis</i>	 Litchi															10 (Food Forest Plot)		10	Edible	Native to the Southeast and Southwest China	
317	<b>Rutaceae;</b> <i>Citrus sinensis</i>	 Sweet orange																10 (Food Forest Plot)		10	Edible	-
318	<b>Rutaceae;</b> <i>Citrus pseudolimon</i>	 Galgal																10 (Food Forest Plot)		10	Edible	Indigenous to India
319	<b>Myrtaceae;</b> <i>Psidium guajava</i>	 Guava																10 (Food Forest Plot)		10	Edible	Native to the Caribbean, Central America and South America
320	<b>Lamiaceae;</b> <i>Vitex parviflora</i>	 Molave tree																4 (Public Healthn Garden)		4	Medicinal	Native to the Philippines and Indonesia
321	<b>Lamiaceae;</b> <i>Vitex agnus-castus</i>	 Chaste tree																5 (Public Healthn Garden)		5	Medicinal	Native to Mediterranean region

322	<b>Fabaceae;</b> <i>Erythriana arborescens L.</i>	 Madar		Kalika	569	Gaja	205								774			774	Medicinal	
323	<b>Cupressaceae;</b> <i>Juniperus macropoda</i>			Kalika	30	Harsil	12								30	10 ( Gymnosperm garden)		30	Decorative	Native to Western Asia
324	<b>Lauraceae;</b> <i>Cinnamomum zeylanicum</i>	 Dalchini														5 (Public Healthn Garden)		5	Medicinal and Spices	Native to Sri Lanka and Southern parts of India
325	<b>Rutaceae;</b> <i>Citrus limon</i>	 Nimbu		Kalsi	15										15			15	Medicinal	Cultivated species
326	<b>Pinaceae:</b> <i>Picea smithiana</i> (wall.) Boiss.	 Spruce		Kalika	70										70	10(Gymnosperm garden, Raditop)		80	construction	Native to western Himalaya and adjacent mountains
327	<b>Cupressaceae;</b> <i>Cupressus sempervirens</i>	 Mediterranean cypress														Gymnosperm garden (5)		5	Ornamental	Native to the eastern Mediterranean region and Iran.





328	<b>Cupressaceae;</b> <i>Cupressus macrocarpa</i>	 Golden cypress															Gymnosperm garden (10)	10	Ornamental	Native to southwestern USA (i.e. Monterey Peninsula in California) and Guadalupe island, off northern-western Mexico
329	<b>Cupressaceae;</b> <i>Hesperocyparis macrocarpa</i>	 Lemon cypress															Gymnosperm garden (5)	5	Ornamental	Found naturally only on the Central Coast of California
330	<b>Cupressaceae;</b> <i>Callitris intratropica</i>	 Blue cypress															Gymnosperm garden (1)	1	Support for reddened, congested skin, can help keep minor skin breaks clean.	Occurs only in Australia and New Caledonia

331	<b>Cupressaceae;</b> <i>Thuja occidentalis</i>															Gymnosperm garden (13)		13	Used for construction purposes.	Grows locally in northwestern Ontario, west-central Manitoba etc.
332	<b>Cupressaceae;</b> <i>Juniperus scopulorum</i>															Gymnosperm garden (5)		5	Infusion of the twigs has been used in the treatment of fevers, pneumonia, cough and colds	Native to western North America, in Canada in south British Columbia and southwest Alberta.
333	<b>Cupressaceae;</b> <i>Juniperus chinensis</i>															Gymnosperm garden (5)		5	Medicinal uses include Heartburn, indigestion and loss of appetite.	Native to China, Myanmar, Japan, Korea and the Russian Far East.
334	<b>Cupressaceae;</b> <i>Cypress spp.</i>															Gymnosperm garden(15)		15		



335	<b>Cupressaceae;</b> <i>Juniper spp.</i>	 Juniper															Gymnosperm garden (15)		15		
336	<b>Cupressaceae;</b> <i>Thuja spp.</i>	 Thuja 6															Gymnosperm garden(10)		10		
337	<b>Podocarpaceae</b> ; <i>Podocarpus spp.</i>	 Podocarpus															Gymnosperm garden(2)		2		
338	<b>Cupressaceae;</b> <i>Cryptomeria spp.</i>	 Cryptomeria															Gymnosperm garden (1)		1		
339	<b>Cupressaceae;</b> <i>Cryptomeria spp.</i>	 Cryptomeria															Gymnosperm garden (1)		1		




340	<b>Cupressaceae;</b> <i>Cunninghamia lanceolata</i>																	Gymnosperm garden (2)		2			
		Cunninghamia																					
341	<b>Cupressaceae;</b> <i>Juniperus spp.</i>																		Gymnosperm garden (5)		5		
		Juniper																					
342	<b>Cupressaceae;</b> <i>Juniper spp.</i>																		Gymnosperm garden(2)		2		
		Juniper																					
343	<b>Cupressaceae;</b> <i>Cryptomeria spp.</i>																		Gymnosperm garden (2)		2		
		Cryptomeria																					
344	<b>Cupressaceae;</b> <i>Pyramidalis arborvitae</i>																		Gymnosperm garden(2)		2		
		Pyramidalis																					








345	<b>Cupressaceae;</b> <i>Juniper communis</i>	 Juniper														Gymnosperm garden(1)		1		
346	<b>Casuarinaceae</b> ; <i>Casuarina equisetifolia</i>	 Coastal sea oak														Gymnosperm garden(3)		3		
347	<b>Dilleniaceae;</b> <i>Dillenia pentagyna</i>	 Karmal	Haldwani	7										7				7	Medicinal	Native to Southeast Asia
348	<b>Rutaceae;</b> <i>Citrus spp.</i>	 Ganga sharbati														5 (Food Forest, Lalkua)		5	Edible	Native to Mediterranean region








## II .Herb Species







Herb species are being conserved across all the Research Ranges with Aromatic Herbs specifically being conserved at Gaja and Haldwani Range:








### I. Aromatic:

S. No	Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Uttarakhand Govt. / Indian Biodiversity Portal)	Nursery										Experiment Site	Preservation Plot	Grand Total	Use	Native Region	
				Nursery Name															Total
				1		2		3		4		5							
Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant										
1.	<b>Valerianaceae;</b> <i>Nardostachys jatamansi</i> DC.	 Jatamansi	Threatened (State Biodiversity Board); Critically endangered (IUCN); Collection from wild Closed for the time being by Uttarakhand Government	Mandal	100	Tangsa	20	Kalika	1260	Dwars on	380	Patalhod	20	1780	1400 (RET demonstration plot , Mana vanpanchayat); 200(RET demonstration plot, Harkot, Munsyari)	23	3403	Medicinal and Aromatic	Endemic to Indian Himalayan region.
2.	<b>Valerianaceae;</b> <i>Valeriana Jatamansi</i> Jones	 Sameva/tagar	Collection from wild Closed for the time being by Uttarakhand Government	Mandal	100	Dwars on	80	Patalhod	1950	Devvan	02	Kalika	50	2182	50 (RET demonstration plot, Harkot, Munsyari)		2232	Medicinal and Aromatic	Indian Himalayan Region
3.	<b>Amaryllidaceae;</b> <i>Allium stracheyi</i> Baker	 Faran	Vulnerable (ENVIS endemic and threatened Taxa) and Vulnerable (Indian Biodiversity Portal)	Mandal	150	Patalhod	500	Devvan	03					653	5 pars (Mana vanpanchayat); 150 (RET demonstration plot, Harkot, Munsyari); 50 Bhujiyaghat (Aromatic plants); 36 (Aromatic species project site, Lalkuan)		883	Spice and Aromatic	Endemic to Himalaya








4.	<b>Zingiberaceae;</b> <i>Hedychium spicatum</i> Han. ex Sm.	 Kapur Kachri		Mandal	3600	Tangsa	250	Patalthod	100	Devvan	03	Gaja	57	4010	30 ( Bhujiyaghat (Aromatic plants); 100 (RET demonstration plot, Harkot, Munsyari); 50 (Riparian plot, Shyampur)		4190	Medicinal and Aromatic	Near Endemic
5.	<b>Amaryllidaceae;</b> <i>Allium wallichii</i> Kunth	 Duna		Mandal	33	Kalika	125	Devvan	02	Patalhod	10			170			170	Spice and Aromatic	India, Nepal, Bhutan and Myanmar.
6.	<b>Apiaceae;</b> <i>Selinum Wallichianum</i> (DC.) Raizada & H.O. Saxena	 Bhootkeshi		Mandal	15	Dwarson	5							20			20	Aromatic	Himalayas
7.	<b>Asteraceae;</b> <i>Spilanthes oleracea</i> L.	 Vulnerable (As per Indian biodiversity portal)		Mandal	1600	Kalsi	90	Devvan	420	Dwarson	20			2130	25(Aromatic species project site, Lalkuan) 20(R.E.T Devvan)		2155	Medicinal and Aromatic	Native to the tropics
8.	<b>Asteraceae;</b> <i>Artemisia maritima</i> L.exHook.f.	 Kudza		Dwarson	258									258	20 (Mana Nursery); 5 (Aromatic species project site, Lalkuan)		310	Medicinal and Aromatic	France, Italy, Russia and India.
9.	<b>Zingiberaceae;</b> <i>Elettaria cardamomum</i> (L.) Maton	 Chhotiilaychi													36(Aromatic species project site, Lalkuan), 2 (Gaja) Wild spices		38	Spices and Medicinal	Southern India
10.	<b>Zingiberaceae;</b> <i>Amomum subulatum</i> Roxb.	 Badi ilaechi		Kalsi	50									50	19(Aromatic species project site, Lalkuan) 5 (Sarital) spices		74	Spices and Medicinal	Eastern Himalaya








11.	<b>Lamiaceae;</b> <i>Mentha piperata</i> L.	 Piper mint		Kalsi	150	Patalthod	590	Dwars on	70	Devvan	06	Tangsa	50	866	20(Aromatic species project site, Lalkuan)		886	Medicinal and Aromatic	Indigenous to Europe and the middle East.
12.	<b>Lamiaceae;</b> <i>Mentha spicata</i> L.	 Pudhina		Kalsi	80	Gaja	112	Tangsa	200					392	40(Aromatic species project site, Lalkuan) 23(Aromatic species project site, Lalkuan)		455	Medicinal and Aromatic	Europe and Southern Asia.
13.	<b>Lamiaceae;</b> <i>Mentha citrata</i> var. <i>Kiran</i>														7(Aromatic species project site)		7	Tea and perfumery	
14.	<b>Acoraceae;</b> <i>Acorus calamus</i> L.	 Bach	Least concern (IUCN) ; Collection from wild closed for the time being by Uttarakhand Government	Kalsi, Shyampur	320	Patalthod	450	Tangsa	80	Kalika	50	Devvan	06	826	500 (Medicinal conservatory, Haldwani); 100 (RET plot and Riparian plot, Shyampur); 55 (Aromatic species project site, Lalkuan)		2126	Medicinal	India, Japan, China, Pakistan and Europe.
15.	<b>Zingiberaceae;</b> <i>Curcuma aromatic</i> Salisb.	 Van haldi		Dwars on	50	Kalika	15							65	80(Aromatic species project site, Lalkuan)		145	Medicinal and Aromatic	Eastern Himalayas and Western Ghats.
16.	<b>Apiaceae;</b> <i>Angelica glauca</i>	 Choru	Endangered (Threatened Plants of India, BSI)	Patalthod	12	Dwars on	5	Devvan	02	Mandal	50			19	20(RET demonstration plot, Harkot, Munsyari); 20 (Mana nursery, Gopeshwar)		109	Medicinal and Aromatic	Endemic to Himalaya (IHR)
17.	<b>Amaryllidaceae;</b> <i>Allium ursinum</i> L.	 Van lehsun		Kalsi	30	Lalkuan	10	Thano	200					240			240	Medicinal and Edible	Europe and Northern Asia.








18.	<b>Asteraceae;</b> <i>Jurinea macrocephala</i> (Royle)C.B.Clarke		Critically Endangered BSI (Flora Of Uttarakhand Vol, 1)	Devvan	400								400	4 (Manavanpanchayat); 6 (Mana Nursery)		410	Aromatic	Indian Himalayan region.
19.	<b>Zingiberaceae;</b> <i>Alpinia galangal</i> (L.)Willd.			Bhujiyaghat	20								20	30 (Bhujiyaghat Aromatic plants); 100 (RET plot, Shyampur); 10 (Aromatic Garden, Lalkuan); 10 (Public Health Garden)		170	Medicinal	Indonesia.
20.	<b>Lamiaceae;</b> <i>Melissa officinalis</i> L.			Bhujiyaghat	100								100	25 Bhujiyaghat(Aromatic plants); 10(Aromatic species project site, Lalkuan)		135	Medicinal, Flavouring agent	Native to south central Europe, the Mediterranean Basin, Iran, and Central Asia.
21.	<b>Lamiaceae;</b> <i>Pogostemon patchouli</i> Benth.													50Bhujiyaghat(Aromatic plants); 25(Aromatic species project site, Lalkuan)		75	Medicinal and Perfumery	Pakistan, India, China, Japan and Myanmar.
22.	<b>Lamiaceae;</b> <i>Coleus barbatus</i> Andrews													20 Bhujiyaghat (Aromatic plants)  10 (Aromatic Project Site); 10 (Public Health Garden)		40	Medicinal	Indian Himalayan Region
23.	<b>Geraniaceae;</b> <i>Geranium robertianum</i> L.													10 Bhujiyaghat(Aromatic plants); 5 (Aromatic species project site, Lalkuan)		15	Aromatic	Europ and part of Asia.








24.	<b>Lamiaceae;</b> <i>Coleus amboinicus</i> Lour.	 Van ajwain	Lalkuan	8									8	10 Bhujiyaghat (Aromatic plants) 100 (RET plot, Shyampur); 24 (Aromatic species project site, Lalkuan); 20 (Public Health Garden)		162	Medicinal and spice	India; and Africa
25.	<b>Saururaceae;</b> <i>Houttuynia cordata</i> Thunb.	 Fishmint	Mandal	15									15	30(Aromatic species project site, Lalkuan)		45	Medicinal and Cooking	Southeast Asia
26.	<b>Lamiaceae;</b> <i>Origanum majorana</i> L.	 Sweet marjoram	Lalkuan	10									10	32(Aromatic species project site, Lalkuan)		42	Aromatic	Mediterranean regions and Indian Himalayan Region.
27.	<b>Asteraceae;</b> <i>Artemisia annua</i> L.	 Sweet wormwood												13(Aromatic species project site, Lalkuan)		13	Aromatic	Temperate Asia.
28.	<b>Piperaceae;</b> <i>Piper logum</i> L.	 Pipli	Shyampur	10 30	Kalsi	10 5							1135	15 (Public Health Garden)		1150	Medicinal and Spice	Indo Malaya region and India.
29.	<b>Apiaceae;</b> <i>Heracleum candicans</i> Lindl.	 Patrala	Patalthod	550									550			550	Medicinal and Spice	Near Endemic
30.	<b>Lamiaceae;</b> <i>Mentha arvensis</i> L.	 Pudina	Patalthod	250									250	65 (Aromatic species project site, Lalkuan)		315	Medicinal and Edible	Central Asia, Himalaya, Europe and N America.






31.	<b>Zingiberaceae;</b> <i>Curcuma amada</i> Roxb.	 Aamahaldi											100 (Riparian plot, Shyampur); 50 Bhujiyaghat (Aromatic plants); 20 (Medicinal conservatory, Haldwani); 10(Aromatic species project site, Lalkuan)	180	Medicinal and Aromatic	East Indian Distribution
32.	<b>Zingiberaceae;</b> <i>Zingiber zerumbet</i> (L.)Roscoe ex Sm.	 Shampoo ginger	Data deficient (IUCN)										20 (RET plot, Shyampur) ; 10 (Aromatic species project site, Lalkuan)	30	Medicinal	Asia
33.	<b>Rutaceae;</b> <i>Boenninghausnia albiflora</i> (Hooker) Reich. ex Meisn.	 Dampate			Tangsa	15						15		15	Aromatic	Nepal, Bhutan, China, and Myanmar
34.	<b>Lamiaceae;</b> <i>Plectranthus rugosus</i> Wall. ex Benth.	 Kurkha		Saritalaal	76							76		76	Medicinal	Indian Himalayan Region, Southern Ghats, and Nilgiri region.
35.	<b>Lamaceae;</b> <i>Thymus serpyllum</i> L.			Dwarson	1	Gaja	195	Bhujiyaghat	100			296	25 Bhujiyaghat (Aromaticplants); 5 (Medicinal conservatory, Haldwani)	326	Spice	Native to most of Europe and North Africa.
36.	<b>Agavaceae;</b> <i>Polianthes tuberosa</i> L.	 Rajanigandha											25 (Aromatic species project site, Lalkuan)	25	Medicinal and Perfumery	Mexico
37.	<b>Asteraceae;</b> <i>Tanacetum dolichophyllum</i> (Kitam. )Kitam.	 Dhup gugul		Mandal	20	Patalhod	20					40		40	Medicinal and Aromatic	Pakistan , Nepal and India



38.	<b>Lamiaceae</b> <i>Lavandula angustifolia</i>	 Lavander		Patal hod	20									20			20	Medicinal	Mediterranean region
39.	<b>Iridiaceae;</b> <i>Crocus sativus</i>	 Kesar		Kalika	7									07			07	Medicinal and Spice	.Iran, India, Greece, Morocco, Spain, Italy, Turkey, Pakistan, Azerbaijan, China, and Egypt
40.	<b>Asteraceae;</b> <i>Matricaria chamomilla</i>	 Chamomile		Dwar son	200									200	210 (Aromatic species project site, Lalkuan)		410	Medicinal and Aromatic	Exotic
41.	<b>Zingiberaceae;</b> <i>Etlingera elatior</i>	 Torch ginger													10 (Aromatic species project site, Lalkuan)		10	Medicinal	Native to Indonesia.
42.	<b>Costaceae;</b> <i>Costus stenophyllus</i>	 Bamboo Ginger													3 (Aromatic species project site, Lalkuan)		3	Ornamental	Native to Costa Rica
43.	<b>Zingiberaceae;</b> <i>Hedychium flavescens</i>	 Yellow Ginger Lily													2 (Aromatic species project site, Lalkuan)		2	Medicinal and Aromatic	Native to the Himalayas, Sichuan, and northern Vietna
44.	<b>Amaryllidaceae ;</b> <i>Allium moly</i>	 Yellow garlic													15 (Aromatic species project site, Lalkuan)		9	Medicinal and Ornamental	Found in Spain and Southern France

45.	<b>Apiaceae;</b> <i>Trachyspermum ammi</i>	 Ajwain													15 (Aromatic species project site, Lalkuan)	15	Medicinal	Native to Egypt Afghanistan, Pakistan, and India.	
46.	<b>Apiaceae;</b> <i>Foeniculum vulgare</i> Mill.	 Fennel													2 Wild spices (Gaja)	2	Spice	Indigenous to the Mediterranean	
47.	<b>Apiaceae;</b> <i>Carum carvi</i> L.	 Kala jeera	Mandal	6	Patalhod	900	Dwarson	5						906	100(RET demonstration plot, Harkot, Munsyari) 30(Sarital) spices	1041	Medicinal and Aromatic	Western Asia, Europe and N Africa.	
48.	<b>Plantaginaceae.</b> <i>Thymus linearis</i> Benth.	 Van ajwain					Devvan	45							45	45	Aromatic and Medicinal	Widespread in Asia	
49.	<b>Lamiaceae;</b> <i>Origanum majorana</i>	 Murwa					Bhuji yaghat	48							48	10 (Aromatic species project site, Lalkuan)	58	Medicinal	Native to temperate Western and Southwestern Eurasia and the Mediterranean region.
50.	<b>Araceae;</b> <i>Homalomena aromatica</i>	 Sugandhmantra													10 (Aromatic species project site, Lalkuan)	12	Perfumer y and cosmetic	Native to India.	
51.	<b>Alliaceae;</b> <i>Allium sativum</i>	 Lahsun													8 (Aromatic species project site, Lalkuan)	8	Medicinal	Native to Central Asia and China	

52.	<b>Gesneriaceae;</b> <i>Didymocarpus aromaticus</i>	 Pattharlong		Mandal	50	Kalika	50								100	85 Gaja (medician action plant)		185	Medicinal	India, Nepal, Bhutan,Myanma , Suthern China, Vietnam, Loas, Cambodia, Thailand,Sumatra
53.	<b>Apiaceae;</b> <i>Coriandrum sativum</i>	 Dhaniya														100(Saritatal) spices		100	Spice	Native to Mediterranean region
54.	<b>Zingiberaceae;</b> <i>Kaempferia galangal</i>	 Sand ginger														5 (Aromatic species project site, Lalkuan)		10	Medicinal / Aromatic	Found in Indonesia, southern China, Taiwan, Camboa , and India
55.	<b>Zingiberaceae;</b> <i>Alpinia purpurata</i>	 Red Ginger														5 (Aromatic species project site, Lalkuan)		5	Medicinal / tic	Native to Malesia
56.	<b>Lamiaceae;</b> <i>Coleus zeylanicus</i>															10 (Aromatic Project Site)		10	Medicinal / Aromatic	Native to Malesia
57.	<b>Apiaceae;</b> <i>Ferula assafoetida</i>	 Hing														5(Saritatal) spices 20 (Public Health Garden); 10 (Aromatic Project Site)		35	Spice	Endemic to Western and Southwestern Iran.
58.	<b>Zingiberaceae</b> <i>Zingiber officinale</i>	 Adrak														6(Saritatal) spices		6	Spice	Originated from Maritime Southeasst Asia.





59.	<b>Polygonaceae</b> <i>Rheum australe</i>	 Dolu/Archu		Deoban	400										400	2(Saritalal) spices		402	Spice	Native to Himalayas
60.	<b>Magnoliaceae;</b> <i>Magnolia sp.</i>															5 (Aromatic Project Site)		5	Aromatic	
61.	<b>Zingiberaceae;</b> <i>Amomum aculeatum</i>															5 (Aromatic Project Site)		5	Aromatic	
62.	<b>Zingiberaceae;</b> <i>Curcuma aeruginosa</i>															8 (Aromatic Project Site)		8	Medicinal / Aromatic	Native range is Bangladesh to W. Malesia.
63.	Zingiberaceae; <i>Curcuma longa</i>															7 (Aromatic Project Site)		7	Medicinal / Aromatic	Native to tropical South Asia
64.	<b>Zingiberaceae;</b> <i>Curcuma zedoaria</i>	 Karchur Haldi														15 (Aromatic Project Site)		15	Medicinal	Native to South Asia and Southeast Asia
65.	<b>Alliaceae;</b> <i>Allium Sativum</i> 'Lasuna'	 Jain garlic														10 (Aromatic Project Site)		10	Medicinal	-
66.	<b>Araceae;</b> <i>Spathiphyllum spp</i>	 Giant Peace Lily														2 (Aromatic Project Site)		2	Aromatic, indoor plant	-

67.	<b>Apiaceae;</b> <i>Selinum vaginatum</i> C.B. Clarke			Devva n	11 5									250 ( Rhizome bank Auli)	–	365	Aromatic	Himalayas
68.	<b>Liliaceae:</b> <i>Allium tuberosum</i>			Bhujiya ghat	99	Gaja	24 0						339	45 (Aromatic Project Site)		384	Culinary	Native to China
69.	<b>Zingiberaceae;</b> <i>Alpinia zerumbet</i>													10 (Public Health Garden) ; 5 (Aromatic Garden, Lalkuan)		15	Medicinal , Perfumer y and Ornament al	Native to Malaysia, Indonesia, and Papua New Guinea.
70.	<b>Zingiberaceae;</b> <i>Hedychium ellipticum</i> Buch.- Ham.ex Sm					Tangsa	3						3	5 (Aromatic Garden, Lalkuan)		8	Aromatic	Himalaya to Indo-China
71.	<b>Zingiberaceae;</b> <i>Hedychium thyrsiforme</i> Sm.					Tangsa	3						3	5 (Aromatic Garden, Lalkuan)		8	Aromatic	Himalaya to E.India and Myanmar





72.	<b>Zingiberaceae;</b> <i>Hedychium coronarium</i> J. Koenig						Tangsa	10						10			10	Aromatic	India, Nepal, Bhutan
73.	<b>Zingiberaceae;</b> <i>Hedychium aurantiacum</i>														5 (Aromatic Garden, Lalkuan)		5	Aromatic	Native to tropical Asia

- 1 Species is yet to be identified







## II. Other Herbs

S.No.	Family; Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Uttarakhand Govt. / Indian Biodiversity Portal)	Nursery														Total	Experiment Site	Preserv ation Plot	Grand Total	Use	Native Region
				Nursery Name																			
				1		2		3		4		5		6		7							
Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant								
1.	<b>Ranunculaceae;</b> <i>Aconitum hetrophyllum</i> Wall. ex Royle	 Atees	Endangered (IUCN ); Threatened (State Biodiversity Board), Collection from wild closed for time being by Uttarakhand Government)	Mandal	152	Tangsa	30	Devvar	3157	Kalika	15	Patal t hod	50					247	150 (Mana vanpanchayat); 400 (RET demonstration plot, Harkot, Munsyari); 21 (RET Devan)		818	Medicin al	Endemi c to Indian Himala yan Region
2.	<b>Ranunculaceae;</b> <i>Aconitum balfouri</i> Stapf	 Meetha	Vulnerable (IUCN); Threatened(State Biodiversity Board); Collection from wild closed for time being by Uttarakhand Government																50 (Mana vanpanchayat); 20 (RET demonstration plot, Harkot, Munsyari)		70	Medicin al	Broadly Endemi c to Uttarak hand
3.	<b>Podophyllaceae;</b> <i>Podophyllum hexandrum</i> Royle	Ban kakri 	Endangered (Research paper)	Mandal	1	Devva n	100	Dwar son	10	Kalika	55							166	4 (Mana vanpanchayat); 20(RET demonstration plot, Harkot, Munsyari)		190	Medicin al	Indian Himala yan Region.
4.	<b>Geraniaceae;</b> <i>Geranium wallichiana</i> D. Don ex Sweet			Mandal	20	Patal t hod	50											20			70	Medicin al	Near Endemi c



5.	<b>Liliaceae;</b> <i>Lilium polyphyllum</i> Don	 White Himalayan Lily/ Kshira Kakoli	Critically endangered (IUCN ); Collection absolutely Prohibited by Uttarakhand Government	Mandal	1														1	Medicinal	Near Endemic	
6.	<b>Rosaceae;</b> <i>Potentilla fulgens</i> Wall.ex Hook	 Bajradanti		Mandal	200	Kalika	104	Dwarson	150	Devvan	250	Patalhod	3700				4404	300 (Manavanpanchayat); 73 (R.E.T Plot, Devvan); 2 (Bhujiyaghat Aromatic plants)		4479	Medicinal	Nepal, Pakistan, China
7.	<b>Saxifragaceae;</b> <i>Bergenia ciliata</i> (How.) Sterb.	 Pashanbedh	Vulnerable International Journal of Biodiversity Science and Management; Limited collection allowed by Uttarakhand Government	Mandal	200	Kalsi	150	Patalhod	1410	Devvan	05	Kalika	350	Dwarson	50		2165	100 (Manavanpanchayat) 10 (Public Health Garden)		2275	Medicinal	Near endemic
8.	<b>Saxifragaceae;</b> <i>Bergenia stracheyi</i> (Hook.f. & Thoms.) Engl	 Pashanbedh		Mandal	20	Devvan	25										20			45	Medicinal	Near Endemic
9.	<b>Scrophulariaceae;</b> <i>Picrorhiza kurrooa</i> Royle ex Benth.	 Kutaki	Endangered IUCN CITES Appendix II	Mandal	3000	Patalhod	3450	Devvan	1300	Dwarson	5						7750	250 (Manavanpanchayat); 50 (RET demonstration plot, 65 (R.E.T Devvan)		8015	Medicinal	East Asia; Himalayas







10.	<b>Polygonaceae;</b> <i>Rheum moorcroftianum</i> Royle	 Dolu	Vulnerable (ENVIS); Collection from wild closed for the time being by Uttarakhand Government	Mandal	86	Patalhod	24											110	80 (Mana vanpanchayat); 50(RET demonstration plot, Harkot, Munsyari)		240	Medicinal	Eastern Europe; temperate regions of Asia.	
11.	<b>Zingiberaceae;</b> <i>Roscoeia purpurea</i> Sm,	 Kakoli		Mandal	30	Patalhod	400	Devvan	05										435	50(RET demonstration plot, Harkot, Munsyari); 4(Gaja) Wild flowers		489	Medicinal	Indian Himlayan Region and Nepal.
12.	<b>Iridaceae;</b> <i>Iris kemaonensis</i> Wall. ex D. Don			Patalhod	100														100	Multiple (Mana vanpanchayat)		100	Medicinal	China, Bhutan and India.
13.	<b>Liliaceae;</b> <i>Paris polyphylla</i> Sm.	 Ban Satuwa	Endangeard (The International Journal of Biodiversity Science and Management); Collection from wild closed for the time being by Uttarakhand Government	Mandal	65	Kalika	10												75	Medicinal 3 Gaja (medician action plant)		78	Medicinal	China, Taiwan and Indian subcontinent.
14.	<b>Liliaceae;</b> <i>Polygonatum cirrhifolium</i> (Wall.) Royle	 Maha Meda	Collection from wild closed for the time being by the Uttarakhand Government	Mandal	20	Tangsa	40	Patalhod	700	Dwarson	20								780	50(RET demonstration plot, Harkot, Munsyari)		810	Medicinal	Indian Himalayan Region






15.	<b>Liliaceae;</b> <i>Polygonatum verticillatum</i> (L.)All.	 Meda	Collection closed for the time being by Uttarakhand Government	Mandal	60	Tangsa	45	Patalhod	700	Dwarson	20	Sarिताताल	5					830	50 (RET demonstration plot, Harkot, Munsyari)		608	Medicinal	Indian Himalayan Region
16.	<b>Liliaceae;</b> <i>Trillium govanianum</i> Wall. ex Royle	 Nagchatri	Endangered IUCN	Mandal	50	Kalika		10										60			60	Medicinal	Endemic to Indian Himalayan Region
17.	<b>Asteraceae;</b> <i>Inula racemosa</i> Hook.f.	 Pushkermool		Tagsa	12	Dwarson	2											14			14	Medicinal	Western Himalayas of Afghanistan, Kashmir, Nepal and Pakistan
18.	<b>Asteraceae;</b> <i>Cichorium intybus</i> L.	 Kasani	Least concern (IUCN)	Tangsa	130	Dwarson	439	Kalika	270	Patalhod	250	Haldwani	150	Lalkuan	10	Kalika	10	1265	300 (Medicinal conservatory, Haldwani); 500 (Kaasni Gene bank, Haldwani); 30 (Public Health Garden)		2095	Medicinal	Africa, Asia and Europe
19.	<b>Amaranthaceae;</b> <i>Achyranthus aspera</i> L.	 Apamarg		Tangsa	35	Gaja	583	Kalika	345									918	1 (Nav GrahaVaatika) 10 (Public Health Garden)		929	Medicinal	Indigenous to South East Asia and Africa
20.	<b>Solaniaceae;</b> <i>Withania somnifera</i> (L.) Dunal	 Aswagandha		Kalika	215	Tangsa	300	Lalkuan	11	Dwarson	300	Shyampur	400	Kalsi	400	Gaja	548	2174	50 (Medicinal conservatory, Haldwani) 150 Gaja (medician action plant); 30 (Public Health Garden)		2404	Medicinal	Drier parts of India

21.	<b>Euphorbiaceae;</b> <i>Phyllanthus niruri</i> L.			Kalika	400	Tangsa	35	Patalhod	50								485	54 Gaja (medician action plant); 45 (Public Health Garden)		584	Medicinal	Tropical & Subtropical America
		Bhui amla																				
22.	<b>Asparagaceae;</b> <i>Urginia indica</i> (Roxb.) Benth			Mandal	30	Dwarson	100	Kalika	20								150	100 (RET plot, Shyampur); 2(Gaja) wild spices 10 (Public Health Garden)		412	Medicinal	Indian subcontinent, India, Nepal, Indo China and Myanmar.
		Ban Pyaj																				
23.	<b>Asteraceae;</b> <i>Saussurea costus</i> (Falc.) Lipsch.		Critically endangered (IUCN); Endangered; Endangered (Indian Biodiversity Portal) included in CITES Appendix I	Mandal	15	Tangsa	350	Patalhod	650	Devvan	05	Kalika	853	Dwarson	15		1304	50 (Manavanpanchayat); 50 RET demonstration plot, Harkot, Munsyari); 2 Bhujiyaghat(Aromatic plants)		1406	Medicinal	Endemic to Himalaya (IHR)
		Koot/Kushta																				
24.	<b>Gentianaceae;</b> <i>Gentiana kurroo</i> Royle		Critically endangered (IUCN), Threatened (Sate Biodiversity Board); Collection from wild closed for time being by Uttarakhand Government	Devvan	957	Tangsa	14	Patalhod	15	Mandal	15	Kalika	10	Dwarson	20		1031	23 (R.E.T Devvan); 15 (Manavanpanchayat); 15 (RET plot Munsyari)		1084	Medicinal	Native to Indian subcontinent,
		Trayman																				
25.	<b>Asparagaceae;</b> <i>Chlorophytum borvivilianum</i>		Critically endangered (IUCN)	Kalika	875	Dwarson	500	Gaja	198								1573	45(Aromatic species project site, Lalkuan)		1618	Medicinal	Native of South Africa
		Safed musli																				


26.	<b>Nyctaginaceae;</b> <i>Boerhavia diffusa</i> L. Nom. Cons.	 Punarnva		Kalsi	40											40	80 Medicinal conservatory, Haldwani) 10 (Public Health Garden)		130	Medicinal	India, South American and African continents.
27.	<b>Plantaginaceae;</b> <i>Bacopa monnieri</i> (L.)Pennell	 Brahmi	Least concern (IUCN)	Kalsi	420	Shyampur	50	Gaja	1568							2038	15000 ( Medicinal conservatory, Haldwani) 10 (Public Health Garden)		17048	Medicinal	India, Nepal, China, Taiwan and Vietnam.
28.	<b>Asteraceae;</b> <i>Eclepta alba</i> (L.) Hassk.	 Bhrangraaj	Least concern (IUCN)	Kalsi	200											200	10 (Public Health Garden)		210	Medicinal	India, Nepal, China, Thailand, and Brazil.
29.	<b>Plantaginaceae;</b> <i>Plantago major</i> L.	 Isabgol	Least concern (IUCN)	Kalsi	80	Kalika	700	Gaja	598							1378	200 (Medicinal conservatory, Haldwani) 300 Gaja (medician action plant) 20 (Public Health Garden)		1898	Medicinal	India, Afghanistan, Australia, Canada, China
30.	<b>Zingiberaceae;</b> <i>Curcuma caesia</i> Roxb.	 Kali haldi		Kalsi	55	Devvan										55	50 (RET plot, Shyampur); 50Bhujiyaghat(Aromatic plants); 2 (Aromatic species site, Lalkuan)		157	Medicinal	Northeast India
31.	<b>Lamiaceae;</b> <i>Plectranthus rotundifolius</i> Spreng.	 Chinese potato		Kalsi	140	Devvan										140			140	Medicinal	Tropical Africa and Asia, India, Sri Lanka

32.	<b>Asparagaceae;</b> <i>Chlorophytum tuberosum</i> (Roxb.) Bake	 Hari musli	Least concern (IUCN)	Kalsi	540												540			540	Medicinal	India, Nepal, Sri Lanka and Uganda
33.	<b>Liliaceae;</b> <i>Cardiocrinm giganteum</i> (Wall.) Makino	 Himalayan lily		Mandal	15												15	2(RET demonstration plot, Harkot, Munsyari)		2	Ornamental	India, China, Nepal, Pakistan.
34.	<b>Plantaginaceae;</b> <i>Digitalis purpurea</i> L.	 Tiluspi		Patalthod	170	Dwarson	5	Kalika	300	Tangsa	40	Devvan	30				540	50(RET demonstration plot, Harkot, Munsyari)		590	Medicinal	Europe, parts of North America.
35.	<b>Asteraceae;</b> <i>Echinacea purpurea</i> L.	 Echinacea																50(Medicinal conservatory) 15 (Public Health Garden)		65	Medicinal	North America
36.	<b>Gentianaceae;</b> <i>Swertia chirayita</i> (Roxb. ex Fleming) Karsten	 Chirayta	Restricted from collection in wild (State Medicinal Plant Board, Uttarakhand) ; Collection from wild closed for time being by Uttarakhand Government	Patalthod	2800	Mandal	60	Deoban	50								2910	50(RET demonstration plot, Harkot, Munsyari); 4Bhujiyaghat (Aromatic plants) 10 (Public Health Garden)		2974	Medicinal	India, Nepal and Bhutan.
37.	<b>Crassulaceae;</b> <i>Bryophyllum pinnatum</i> (Lam.) Oken	 Patharchatta		Shyampur	200												200	50 (RET plot, Shyampur) 10 (Public Health Garden)		260	Medicinal	Native to Madagascar.
38.	<b>Costaceae;</b> <i>Costus pictus</i> D. Don	 Insulin plant																20 (RET plot, Shyampur)		20	Medicinal	Native to Mexico.

39.	<b>Colchicaceae;</b> <i>Gloriosa superba</i> L.	 Kalihari	Least concern (IUCN); Collection from wild closed for the time being by Uttarakhand Government.	Kalika	10	Patalhod	3									20	20 (RET plot, Shyampur); 20(Medicinal conservatory, Haldwani) 15 (Public Health Garden)		48	Medicinal	Indian Sub continent	
40.	<b>Lamiaceae;</b> <i>Eremostachys superba</i> Royle ex Benth.	 Golden Himalayan Spike/ Moonch	Threatened (State Biodiversity Board)	Mandal	6												8 (RET plot, Shyampur); 2 (Medicinal conservatory, Haldwani)		16	Medicinal	Near Endemic to Shiwaliks or NW India.	
41.	<b>Zygophyllaceae;</b> <i>Tribulus terrestris</i> L.	 Gokharu															1100(Dashmool species experimental plot, Lalkuan); 50 (Public Health Garden)		1150 (approx.)	Medicinal	Native of the Mediterranean region	
42.	<b>Asteraceae;</b> <i>Arctium lappa</i> L.	 Beggar's buttons		Devvan	663											663	40 (R.E.T Devvan)		703	Medicinal	Native to northern Europe	
43.	<b>Acanthaceae;</b> <i>Andrographis paniculata</i> (Burm.f.)Nees	 Kalmegh		Kalsi	80											80	36 (Medicinal conservatory, Haldwani) 10 (Public Health Garden)		126	Medicinal	India and Sri Lanka.	
44.	<b>Asphodelaceae;</b> <i>Aloe barbadensis</i> Mill.	 Ghratkumari		Kalsi	50	Gaja	220	Bhuji yaghat	50								330	10 (Public Health Garden)		340	Medicinal	Arabian Peninsula

45.	<b>Solanaceae;</b> <i>Solanum nigrum</i> L.			Shyam pur	20												20	2 (Wild berries and fruits Gaja) 10 (Public Health Garden)		32	Medicinal	Native to Eurasia and introduced in the Americas, Australasia, and South Africa
46.	<b>Solanaceae;</b> <i>Solanum xanthocarpum</i> Schrad.& H. Wendl.	 Kantkari																50 (Medicinal conservatory, Haldwani); 800 approx.(Dashmool species experimental plot,Lalkuan); 20 (Public Health Garden)		870	Medicinal	Central Himalaya
47.	<b>Urticaceae;</b> <i>Urtica dioica</i>	 Bicchu Ghas		Dwarson	108	Devvan	15										123	20 Gaja (Edible plants)		143	Medicinal	Native to Europe, Asia, northern Africa, and America
48.	<b>Euphorbeaceae</b> ; <i>Euphorbia hirta</i>	 Dudhi Ghas		Dwarson	60	Patalhod	100										60			160	Medicinal	Native to America
49.	<b>Fabaceae;</b> <i>Trifolium alexandrinum</i>	 Barsim Ghas		Dwarson	500												500				Fodder	Native to western Asia.







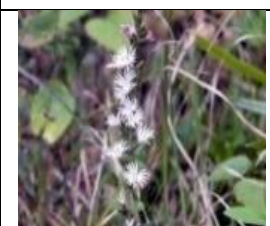


50.	<b>Asparagaceae;</b> <i>Ophiopogon japonicas</i> (L.f.) Ker Gawl.	 Kali ghas		Dwarson	70													5 (Grass Demonstration Plot, Shyampur)		75	Medicinal	China, Japan, India and Vietnam.	
51.	<b>Ranunculaceae;</b> <i>Aconitum leave</i> Royle			Mandal	10													10		10	Medicinal	India, Pakistan and Nepal	
52.	<b>Violaceae;</b> <i>Viola pilosa</i> L.	 Vanpsa		Mandal	50	Kalika	25											75	10 (Public Health Garden)		85	Medicinal	Nepal, China and Pakistan
53.	<b>Rubiaceae;</b> <i>Rubia cordifolia</i> L.	 Manjith		Mandal	20	Patalhod	100	Devvan	04	Gaja	22	Sariat aal	155					301	100 (Gaja medicinal beds) 10 (Public Health Garden)		411	Medicinal	Widespread in northern hemisphere
54.	<b>Ephedraceae;</b> <i>Ephedra gerardiana</i> Wall. ex Stapf	 Somlata	Critically endangered Research Paper	Mandal	30	Gaja	2	<b>Kalika</b>	<b>200</b>									232			232	Medicinal	Tajikistan, Nepal, China and India
55.	<b>Lamiaceae;</b> <i>Ajuga parviflora</i> Benth.	 Ratpatiya		Kalika	50	Gaja	302	Gaja	701									1053	10 (Public Health Garden)		1063	Medicinal	Near Endemic
56.	<b>Liliaceae</b> <i>Clintonia udensis</i>			Patalhod	30													50			50	Edible	East Asia – Himalayas to S.W. China

57.	<b>Genetianaceae</b> <i>Gentiana argentea</i>			Patalthod	50												50			50	Berverages	Himalayas
58.	<b>Asteraceae;</b> <i>Taraxacum officinale</i>	 Dandelion		Patalthod	50	Devvan	03										53			53	Medicinal	Nepal, Chiana, India
59.	<b>Lamiaceae</b> <i>Ajuga brachystemon</i>	 Ratpati		Patalthod	50	Mandal	20										70			70	Medicinal	Endemic to Himalaya
60.	<b>Violaceae</b> <i>Viola spp.</i>	 Banfsa		Patalthod	100												100			100	Medicinal	Asia and Europe
61.	<b>Zingiberaceae;</b> <i>Roscoea alpina</i>	 Musli		Patalthod	100	Mandal	30										130	2(Wild flowers Gaja)		132	Medicinal	Native to the Himalaya
62.	<b>Genetianaceae;</b> <i>Gentiana membranulifera</i>	 Clustered Summer Gentian		Patalthod	50												50			50	Beverages	E. Afganistan to Himalaya
63.	<b>Scrophulariaceae;</b> <i>Verbascum thaspus</i>	 Aekalveer		Patalthod	30	Devvan	02										32			32	Medicinal	Europe, Africa and Asia.
64.	<b>Urticaceae;</b> <i>Pouzolzia zylanica</i>	 Chiphaljadi		Patalthod	100												100			100	Edible and Medicinal	E. Asia to SouthEast Asia






65.	<b>Polygonaceae</b> <i>Oxyria digyna</i>	 Chaktali	Patalthod	10												10			10	Medicinal	Native to Arctic region ; Mountainous part of Northern Hemisphere
66.	<b>Rosaceae;</b> <i>Potentilla polyphylla</i>	 Many leaf Cinquefoil	Patalthod	100												100			100	Medicinal	Himalayas from Uttarakhand to Bhutan
67.	<b>Asphodelaceae;</b> <i>Aloe nyeriensis</i>		Shyam pur	05												05			05	Medicinal	East tropical Africa central Kenya.
68.	<b>Begoniaceae;</b> <i>Begonia dioica</i>		Devvan	05												05			05	Ornamental	Himalayas, from Pakistan to Sikkim
69.	<b>Hypericaceae;</b> <i>Hypericum elodeoides</i>		Devvan	05												05			05	Medicinal	Kashmir to Southwest China and Burma.
70.	<b>Urticaceae;</b> <i>Girardinia diversifolia</i>	 Himalayan nettle	Devvan	05													10 (Public Health Garden)		15	Medicinal	Uttarakhand, Himachal Pradesh and jammu& Kashmir and also in vast part of China.

71.	<b>Boraginaceae;</b> <i>Cynoglossum lanceolatum</i>	 Lanceleaf forget me not		Devvan	03														03	Medicinal	Africa, Western. Asia and Himalayas.
72.	<b>Ranunculaceae;</b> <i>Thalictrum foliolosum</i>	 Mamiraa		Devvan	03	Mandal	5												08	Medicinal	Himalayan range across India, Nepal, bhutan, SE Tibet and Burma .
73.	<b>Lamiaceae ;</b> <i>Ajuga bracteosa</i>	 Nilkanthi		Devvan	30														30	Medicinal	Kashmir to Nepal
74.	<b>Caesalpinioideae;</b> <i>Cassia tora</i>	 Panwar		Haldwani	10	Lalkuan	6								16	10 (Public Health Garden			26	Medicinal	Native to Central America
75.	<b>Araceae;</b> <i>Aglaonema commutatum</i>	 Chinese Evergreen		Haldwani	10														10	Ornamental	Native to Philippines
76.	<b>Asparagaceae;</b> <i>Aspidistro elatior</i>	 Cast iron plant		Haldwani	10														10	Ornamental	Native to Japan
77.	<b>Cleomaceae;</b> <i>Cleome viscosa</i> Linn.	 Asian spider flower														2(Gaja) wild spices			2	Spice	Native to Indian Ocean Islans

78.	<b>Lamiaceae;</b> <i>Perilla frutescens</i> (L.)	 Perilla																2(Gaja) wild spices		2	Edible	Native to India	
79.	<b>Malvaceae;</b> <i>Pavonia odorata</i> Willd.		Sariyat aal	45														45	2(Gaja) nursery beds		47	Medicinal	Native to Asia
80.	<b>Ranunculaceae;</b> <i>Aquilegia pubiflora</i> Wall.		Mandal	4														4			4	Medicinal	Pakistan, Nepal and India
81.	<b>Dioscoreaceae;</b> <i>Dioscorea deltoidea</i> Wall. ex Griseb.		Endangered Research Paper JBES Vol.9 No.6,p.13 24,2016	Tangsa	9	Devan	4											13			13	Medicinal and Edible	Nepal, China, Bhutan
82.	<b>Zingiberaceae;</b> <i>Hedychium coronarium</i> J. Koenig					Tangsa	5	Shyampur	80									85	10 (Aromatic species project site, Lalkuan) 10 (Public Health Garden)		105	Medicinal	India, Nepal, Bhutan
83.	<b>Zingiberaceae;</b> <i>Costus pictus</i> D.Don	 Insulin buti				Tangsa	5											5	10 (Public Health Garden)		20	Medicinal	south and Central America
84.	<b>Asteraceae:</b> <i>Aisnliaea aptera</i>	 Kadu				Kalsi	40	Devvan	150									190			190	Medicinal	Mainly distributed in southern Asia

85.	<b>Araceae:</b> <i>Apathiphyllum wallisii</i>	 Peace lily		Shyam pur	05												05			05			
86.	<b>Asparagaceae:</b> <i>Chlorophytum comosum</i>	 Spider plant		Shyam pur	05													05			05		
87.	<b>Acanthaceae:</b> <i>Strobilanthes cusia</i>	 Assam indigo		Shyam pur	05													05			05		
88.	<b>Hypoxidaceae;</b> <i>Curculigo orchoides</i>	 Kali musli																	20 Gaja (medician action plant) 10 (Public Health Garden)		30	Medicinal	Native to Nepal, China, Japan, and the Indian suconti nenet,P apuasia
89.	<b>Amaranthaceae;</b> <i>Chenopodium album</i>	 Bathuwa saag																	40 Gaja (Edible plants)		40	Food crop	Native to Europe and Eastern Asia.
90.	<b>Amaranthaceae;</b> <i>Amaranthus hypochodriacus</i>	 Chaulai																	20 Gaja (Edible plants)		20	Medicinal	Southern North America.
91.	<b>Araceae;</b> <i>Colacaria esculenta</i>	 Pinaloo																	20 Gaja (Edible plants)		20	Edible leaf, root, corms	Native to Eastern Asia.

92.	<b>Fabaceae;</b> <i>Glycyrrhiza glabra</i>	 Mulethi																40 (Public Health Garden)	40	Medicinal	Native to Eurasia	
93.	<b>Costaceae;</b> <i>Cheilocostus speciosus</i> (Koen ex. Retz.) Sm.	 Kevkand	Lalkuan	5	Tangsa	10												15	25 (Public Health Garden)	40	Medicinal	Native to tropical and subtropical regions of Asia and Africa
94.	<b>Amaranthaceae;</b> <i>Aerva lanata</i>	 Gorakhgaja																	10 (Public Health Garden)	10	Medicinal	Native to Asia and Africa
95.	<b>Lamiaceae;</b> <i>Leucas cephalotes</i>	 Dronpushpi																	10 (Public Health Garden)	10	Medicinal	Asia from China to the Indian subcontinent.
96.	<b>Asteraceae;</b> <i>Sphaeranthus indicus</i>	 Gorakh Mundi																	10 (Public Health Garden)	10	Medicinal	Northern Australia throughout Indomalaya
97.	<b>Convolvulaceae;</b> <i>Convolvulus prostratus</i>	 Sankhpushpi	Dwarson	6														6		6	Medicinal	India and Burma

98.	<b>Lamiaceae;</b> <i>Salvia aegyptiaca</i>	 Tutmalanga															10 (Public Health Garden)	10	Medicinal	Native range is Macaronesia to NW. India		
99.	<b>Asteraceae;</b> <i>Cirsium arvense</i>	 Creeping Thistle															10 (Public Health Garden)	10	Medicinal	Native throughout Europe, western Asia and northern Africa		
100	<b>Ranunculaceae;</b> <i>Aconitum ferox</i> Wall. ex Ser.																-	5 (Manavanpanchayat)	-	5	Medicinal	Endemic in Indian Himalayan Region
101	<b>Asphodelaceae;</b> <i>Kniphofia uvaria</i>	 Torch lily	----	Patalahod	20												20			20	Ornamental	Native, South Africa
102	<b>Polygonaceae;</b> <i>Homalocladium platycladum</i>	 Tapeworm Plant		Gaja	20												20			20	Ornamental	Native to the Solomon Islands.


















### III. Shrub Species








Shrubs Species are conserved across all the Research Ranges with Tulsi species being specifically conserved at Haldwani and Dehradun Range.



#### I. Tulsi

S. No	Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Uttarakhand Govt. / Indian Biodiversity Portal)	Nursery										Experiment Site	Preservation Plot	Grand Total	Use	Native Region	
				Nursery Name															Total
				1		2		3		4		5							
Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant										
1.	<b>Lamiaceae;</b> <i>Ocimum gratisimum</i> Linn.	 Launga Tulsi		Patalhod	1880									1880	36 (Tulsi experimental block Lalkuan); 10(Tulsi Vatika Shyampur); 10 (Tulsi vatika Haldwani); 15 (Bhujiyaghat (Aromatic plants))		1951	Medicinal	Africa, E. Asia India, Sri Lanka, Nepal and Vietnam.
2	<b>Lamiaceae;</b> <i>Origanum vulgare</i>	 Badri Tulsi													40 (Tulsi block Lalkuan); 20 (Public Health Garden)		60	Medicinal & religious	Native to the Mediterranean region
3	<b>Lamiaceae;</b> <i>Ocimum tenuiflorum</i> Linn.	 Tulsi		Kalsi	10	Dwarson	50	Kalika	1009					1069	30 (Tulsi experimental block); 10 (Tulsi Vatika Shyampur); 20 (Tulsivatika Haldwani); 44 (Tulsi block Lalkuan); 10 (Tulsi Vatika Shyampur); 12 (Bhujiyaghat (Aromatic plants)); 20 (Public Health Garden)		1209	Medicinal and religious	Native (Indian subcontinent).
3A	<b>Lamiaceae;</b> <i>Ocimum tenuiflorum</i>	 Shyama Tulsi													30 (Tulsi experimental block Lalkuan); 10 (Tulsi Vatika Shyampur); 21 (Tulsi vatika Haldwani)		61	Medicinal	Indian subcontinent





3B	<b>Lamiaceae;</b> <i>Ocimum tenuiflorum</i> <i>var. Angana</i>	 Angana Tulsi												2 (Tulsi experimental block)		2	Medicinal	Developed by SIR CIMAP, Lucknow
3C	<b>Lamiaceae;</b> <i>Ocimum tenuiflorum</i> <i>var. Kanchan</i>	 Kanchan Tulsi												7(Tulsi experimental block)		7	Medicinal	Developed by CSIR CIMAP, Lucknow
3D	<b>Lamiaceae;</b> <i>Ocimum tenuiflorum</i> <i>var. Amrita</i>	 Amrita tulsi												10 (Tulsi Vatika Shyampur)		10	Medicinal	
4	<b>Lamiaceae;</b> <i>Ocimum kilimandscharicum</i> Gurke	 Kapur Tulsi		Dwarson	10									10 (Tulsi block Lalkuan); 10 (Tulsi Vatika Shyampur); 15 (Bhujiyaghat (Aromatic plants))		45	Medicinal and Religious	Native to Kenya, Tanzania, Uganda, Sudan, and Ethiopia
5	<b>Lamiaceae;</b> <i>Ocimum basilicum</i> L.inn.	 Babui tulsi		Kalsi	990	Gaja	62						1052	36 (Tulsi block Lalkuan); 10 (Tulsi Vatika Shyampur); 11 (Tulsi vatika Haldwani); 15 Bhujiyaghat (Aromatic plants)		1124	Medicinal and Religious	India, Pakistan and Thailand.
5A	<b>Lamiaceae;</b> <i>Ocimum basilicum</i>	 Sabja Tulsi		Dwarson	5									34 (Tulsi experimental block Lalkuan); 10 (Tulsi Vatika Shyampur); 5 (Tulsi vatika Haldwani)		54	Medicinal and Religious	India, Pakistan and Thailand
5B	<b>Lamiaceae;</b> <i>Ocimum basilicum</i> <i>var. Saumya</i>	 Saumya Tulsi												32 (Tulsi experimental block lalkuan); 10 (Tulsi Vatika Shyampur);		42	Medicinal	Developed by CSIR CIMAP, Lucknow

5C	<b>Lamiaceae;</b> <i>Ocimum basilicum</i> 'Genovese'													14 (Tulsi experimental block Lalkuan); 10 (Tulsi Vatika Shyampur)	24	Medicinal	Native of Africa and Asia
5D	Lamiaceae; <i>Ocimum basilicum</i>	 Thai tulsi	Lalkuan	5									5	10 (Tulsi Vatika Shyampur)	15	Medicinal	India, Pakistan and Thailand
6	<b>Lamiaceae;</b> <i>Ocimum americanum</i> Linn.	 Kali Tulsi	Kalsi	10									10	40 (Tulsi block Lalkuan); 15 (Tulsi Vatika Shyampur); 12 Bhujiyaghat (Aromatic plants)	67	Medicinal and Religious	Native to Africa, the Indian Subcontinent, China, and Southeast Asia
7	<b>Lamiaceae;</b> <i>Salvia officinalis</i> Linn.													30 (Tulsi block Lalkuan); 10 (Tulsi Vatika Shyampur)	40	Medicinal and Religious	Native to the Mediterranean region
8	<b>Lamiaceae;</b> <i>Ocimum X citriodorum</i> Vis.	 Nimbu Tulsi												30 (Tulsi block Lalkuan); 10 (Tulsi Vatika Shyampur); 16 (Tulsi vatika Haldwani)	56	Medicinal	Africa and Asia
9	<b>Asteraceae;</b> <i>Stevia rebaudiana</i>	 Mithi tulsi	Kalsi	10	Kalika	10							20	10 (Tulsi Vatika Shyampur); 5 (Tulsi vatika Haldwani) 35 (Tulsi block Lalkuan); 20 (Public Health Garden)	70	Medicinal	Native to Paraguay
10	<b>Lamiaceae;</b> <i>Ocimum viride</i> Willd.	 Ajwain tulsi												10 (Tulsi Vatika Shyampur); 20 (Tulsi block Lalkuan)	30	Medicinal	Native to Africa

11	<b>Lamiaceae;</b> <i>Ocimum</i> <i>vekiamdeem</i>	 Deepam tulsi												10 (Tulsi Vatika Shyampur); 30(Tulsi block Lalkuan)		40	Medicinal	
12	<b>Lamiaceae;</b> <i>Ocimum</i> <i>basilicum</i> L.													35 (Tulsi block Lalkuan)		40	Medicinal	Native of Africa and Asia
13	<b>Lamiaceae;</b> <i>Ocimum</i> <i>basilicum</i>	 Italian Basil												20 (Tulsi block Lalkuan)		25	Medicinal	Native of Africa and Asia
14	<b>Lamiaceae;</b> <i>Ocimum</i> <i>sanctum</i>	 Amrita Tulsi												15 (Tulsi block Lalkuan)		15	Medicinal	Native to the Indian subcontinent
15	<b>Lamiaceae;</b> <i>Ocimum</i> <i>kilimandscharicum</i> × <i>basilicum</i> 'Dark Opal'	 African blue basil		Lalkuan	5									20 (Tulsi block Lalkuan)		25	Medicinal	-
16	<b>Lamiaceae;</b> <i>Ocimum</i> <i>basilicum</i> var. <i>thyrsiflora</i>	 Thai Basil		Lalkuan	2									25 (Tulsi block Lalkuan)		27	Medicinal	- -
17	<b>Lamiaceae;</b> <i>Ocimum</i> <i>basilicum</i> 'Purpurascens'	 Red sweet basil												20 (Tulsi block Lalkuan)		20	Medicinal	- -

18	<b>Lamiaceae;</b> <i>Ocimum basilicum</i> <i>spp</i> 'Damro'	 Damro Tulsi												15 (Tulsi block Lalkuan)		15	Medicinal	- -
19	<b>Lamiaceae;</b> <i>Ocimum basi</i> <i>licum</i> 'Cinnamon'	 Vietnamese basil												15 (Tulsi block Lalkuan)		15	Medicinal	- -







## II. Other Shrub

S.No.	Family; Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVI S/Uttarakhan d Govt. / Indian Biodiversity Portal)	Nursery														Experiment Site	Pres erva tion Plot	Grand Total	Use	Native Region	
				Nursery Name																			Total
				1		2		3		4		5		6		7							
				Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant						
1.	<b>Fabaceae;</b> <i>Indigofera heterantha</i> Wall. ex Brandis	 Sakina		Mandal	60	Gaja	888	Bhujiy aghat	150									1098			1098	Dye	Northwest ern Himalayas of Tibet.
2.	<b>Rosaceae;</b> <i>Cotoneaster bacillaris</i> Wall. ex Lind.	 Ruis		Mandal	300	Tangsa	500	Shrikot	500	Dwa rson	276	Saritat aal	958					2534	1340 (Trishula comp.1 K.W.L.D); 18 (Miyawaki Experiment, Gaja) 22 (R.E.T Devvan); 1(Arboretum, Haldwani)		3916	Fodd erand Agric ultura l imple ments	Near endemic Uttarakha nd, Wester n Himalaya n region
3.	<b>Rosaceae;</b> <i>Pyracantha crenulata</i> Wall. ex Lind.	 Ghigaru		Mandal	895	Tangsa	6581	Shrikot	600	Kali ka	1225	Dwars on	200	Devva n	205	Gaja	936	1064 2	2Gaja(wild berries and fruits); 2(Arboretum, Haldwani) 5 (Public Health Garden) 155 (Herbal Garden)		10806	Edible	Temperate Himalayas
4.	<b>Rosaceae;</b> <i>Rosa macrophyllaa</i> Lind.	 Ban Gulab		Tangsa	1250	Shrikot	4194											5444			5444	Oil and Orna mental	Western Himalayas














5.	<b>Rosaceae;</b> <i>Rubus ellipticus</i> Sm.	 Hisalu		Mandal	1181	Tangsa	165	Kalika	630	Dwarson	324							2300	541(Miyawaki Experiment); 2Gaja(wild berries and fruits); 2(Arboretum, Haldwani 20 (Public Health Garden)	2865	Edible, Medicinal	China, Nepal, Indian Subcontinent and Philippines.
6.	<b>Urticaceae;</b> <i>Debregeasia salicifolia</i> (D. Don) Rendle	 Tushshaare		Mandal		Tangsa	1200											1200	100 (RET plot, Shyampur)	1300	Fodder	NE India; Tropical Africa; Central Himalaya.
7.	<b>Lauraceae;</b> <i>Lindera pulcherrima</i> (Nees) Benth. ex Hook.f.	 Cher		Mandal	50	Devvan	400											450	35 (R.E.T Devvan)	485	Fodder	Eastern Asia
8.	<b>Elaeagnaceae;</b> <i>Hippophae salicifolia</i> (D. Don) Serv.	 Amesh	Least concern (IUCN)	Mandal	260	Devvan	1700	Patalthod	1006	Kalika	50							2110	50 (R.E.T Plot, Devvan); 60 (Miyawaki Experiment) 5 (Public Healthn Garden)	2225	Medicinal	Indian Himalayan region
9.	<b>Lythraceae;</b> <i>Woodfordia fruticosa</i> (L.) Kurz	 Dhola	Least concern (IUCN)	Mandal	400	Shrikot	140	Kalika	150	Dwarson/ Kalika	95/62	Gaja	95	Lalkuan	20	Lohathal	10	910	200 (Riparian plot) 2 (Arboretum, Haldwani); 61 (Color& tanning experimental plot, Lalkuan; 470 lantana plot kalsi; 1(Arboretum Gaja); 294 (Miyawaki Exp.) 30 (Herbal Garden)	1960	Fodder, Tannin and Dye.	India

10.	<b>Berberidaceae;</b> <i>Berberis aristata</i> DC.	 Kilmora	Least concern. (IUCN)	Mandal	30	Shrikot	500	Kalika	84	Dwarson	1100	Kalsi	808			Patalthod	25	2547	892 plants in Miyawaki Experiment ; 70(RET demonstration plot, Harkot, Munsyari); 2 Gaja(wild berries and fruits); 2(Arboretum, Haldwani);100 Lantana Plot Kalsi 20 (Public Health Garden)	3633	Medicinal	Near endemic
11.	<b>Rutaceae;</b> <i>Zanthoxylum armatum</i> DC.	 Timaru	Collection from wild closed for the time being by Uttarakhand government	Mandal	800	Tangsa	1350	Dwarson	300	Patalthod	180	Kalika	2368	Sariat aal	932	Bhujiyaghat	2100	8030	903(Trishula comp.1 K.W.L.D): 318 Miyawaki Experiment, Kalika); 1(Arboretum, Haldwani) 2(Arboretum Gaja); 10 (Public Health Garden); 5 (Aromatic Project Site)	9269	Spice and Medicinal	Nepal, China, Japan and Pakistan
12.	<b>Rutaceae;</b> <i>Skimmia laureola</i> (DC) Zucc	 Kedarpati		Mandal	2500	Devvan	2000	Sariat aal	83									4583	5256 (R.E.T Devvan Kanaser range); 2 (Arboretum Gaja)	9841	Incense sticks	Near endemic
13.	<b>Oleaceae;</b> <i>Fraxinus xanthoxyloides</i> (G. Don) DC.		Least Concern (IUCN)	Mandal	900	Tangsa	230											1130	60 (Tangsa nursery)	1190	Walking sticks	Afghanistan, China and Pakistan.

14.	<b>Lamiaceae;</b> <i>Rosemarinus officinalis</i> L.	 Rosemary		Kalika	71	Dwarson	472	Gaja	1076	Bhujiyaghat	206	Devvan	30					1855	5Bhujiyaghat(Aromatic plants); 30(Aromatic species project site, Lalkuan)		1890	Ornamental and Flavoring agent	Native to the Mediterranean region.
15.	<b>Elaeagnaceae;</b> <i>Elaeagnus umbellata</i> Thunb.	 Ginroye		Kalika	676	Dwarson	160	Gaja	165	Sariataal	215							1216	339 (Miyawaki Experiment); 1(Arboretum Gaja); 15 (Public Health Garden)		1571	Medicinal	Indian Himalayan Region
16.	<b>Coriariaceae;</b> <i>Coriaria nepalensis</i> Wall.	 Makol		Kalika	69	Patalthod	50	Gaja	5	Sariataal	144							268	424 (Miyawaki Experiment); 1(Arboretum, Haldwani) 1(Arboretum Gaja)		694	Soil binder	Indian Himalayan Region
17.	<b>Primulaceae;</b> <i>Myrsine africana</i> L.	 Rikhdalmi		Dwarson	24	Gaja, Wild flowers	2											791	765(R.E.T Devvan + kanaser range);78 (Miyawaki, Haldwani); 135 (Miyawaki Experiment); 10 (Public Health Garden)		1012	Control soil erosion and Medicinal	Nepal, Bhutan, China
18.	<b>Rosaceae;</b> <i>Principia utilis</i> Royle	 Jhitalu		Dwarson	276	Devvan	346	Saritataal	50	Kalika	255							927	360 (Miyawaki Experiment) 26 (R.E.T Devvan)		1313	Control of soil erosion	Native of Himalayas
19.	<b>Fabaceae;</b> <i>Desmodium elegans</i> DC.	 Chamlai		Dwarson	14													14	84 (Miyawaki Experiment); 58 (R.E.T Devvan)		156	Medicinal	Nepal, Bhutan, China and Pakistan

20.	<b>Apocynaceae;</b> <i>Carissa opaca</i> Stapf.	 Karonda																102 (River range Kalsi); 3(Arboretum, Haldwani); 16 (Sal associate experimental site, Lalkuan); 104 Lantana Plot Kalsi); 20 (Public Health Garden)	235	Edible	Tropical and subtropical Asia, Africa and Australia.		
21.	<b>Apocynaceae;</b> <i>Rauvolfia serpentina</i> (L.) Benth. ex Kurz	 Sarpagandha	Endangered (IUCN) ; Collection from wild closed for the time being by Uttarakhand Government	Kalsi	155	Gaja	15	Bhujiy aghat	10									180	50 (RET plot, Shyampur); 200 (Medicinal conservatory, Haldwani) 20 (Public Health Garden)	450	Medicinal	East Asia, India to Indonesia.	
22.	<b>Mimosaceae;</b> <i>Mimosa pudica</i> L.	 Chhuimui	Least concern (IUCN)	Kalsi	250													250	(Medicinal conservatory, Haldwani) 10 (Public Health Garden)	260	Medicinal	Native to South and Central America	
23.	<b>Moraceae;</b> <i>Maclura cochinchinensis</i> (Laur.) Corner	 Damaru/ Cockspur thorn																	177 (Lantana Plot Kalsi)	177	Medicinal and Dye	Asia; Indian Subcontinent	
24.	<b>Asteraceae;</b> <i>Artimisa nilagirica</i> (C.B.Clarke)Pamp.	 Paati		Kalsi	100														100	44 (Aromatic species project site, Lalkuan) 20 Bhujiyaghat (Aromatic plants)	164	Medicinal and Aromatic	Europe, Asia, Northern Africa.
25.	<b>Acanthaceae;</b> <i>Adhatoda vasica</i> Nees	 Vasa/Vasaka		Kalsi	50	Tangsa	30	Kalika	10										90	50 (RET plot, ) 49 (Medicinal conservatory, Haldwani) 20 (Public Health Garden)	209	Medicinal	India , and Myanmar






26.	<b>Thymelaeaceae;</b> <i>Daphne papyracea</i> Wall.	 Satpura		Devvan	750											750	20(R.E.T Devvan )	770	Medi cinal	Near endemic
27.	<b>Berberidaceae;</b> <i>Berberis lambertii</i> Parker		Vulnerable (India Biodiversity Portal)	Patalthod	20											20	5(RET demonstration plot, Harkot, Munsyari)	25	Medi cinal	Endemic
28.	<b>Phyllanthaceae;</b> <i>Antidesma diandrum</i> Roth.	 Khatai		Lalkuan	7											7	100 (RET plot); 22 Pipalparao (Mixed Biodiversity Plot); 2 Arboretum, Haldwani; 17 (Mixed biodiversity plot, lalkuan); 30 (Shyampur RET Plot)	171	Food	Sub – Himalaya n tracts and Myanmar.
29.	<b>Mimosaceae;</b> <i>Acacia concinna</i>	 Shikakai															1(Arboretum, Haldwani); 10 (Public Health Garden)	11	Dyein g	Asia, Warm plains of central and south India.
30.	<b>Rubiaceae;</b> <i>Randia dumetorum</i> Lam.	 Mainfal		Shyampur	15	Lalkuan	10									25	200 (Riparian plot); 20 Pipalparao (Mixed Biodiversity Plot); 6 (Miyawaki, Haldwani); 15 (Mixed biodiversity plot, Lalkuan); 10 (Public Health Garden)	276	Medi cinal	Sub – Himalaya n tracts & outer hills from the Beas eastwards.
31.	<b>Fabaceae;</b> <i>Sophora mollis</i> Graham.	 Peeli sakina															10 (Shyampur RET plot)	10	Medi cinal	North Western Himalayas ,China and Nepal.







32.	<b>Fabaceae;</b> <i>Desmodium gangeticum</i> (L.) DC.	 Salprani	Collection from wild closed for the time being by Uttarakhand Government.															150 (RET plot); 200 (Medicinal conservatory, Haldwani); 1100 approx. (Dashmool species plot, Lalkuan); 10 (Public Health Garden)	1460	Medicinal	Tropical and Subtropical (Africa and South Asia) regions of India and Gangetic plains.
33.	<b>Plumbaginaceae</b> ; <i>Plumbago zeylanica</i> L.	 Chitrak		Kalsi	20												20	150 (RET plot) 36 (Medicinal conservatory, Haldwani) 12 (Public Health Garden)	218	Medicinal	South Asia
34.	<b>Tiliaceae;</b> <i>Grewia hirsuta</i> Vahl.	 Gurbeli		Lalkuan	140													50 (RET plot);10 (Miyawaki, Haldwani);1 Arboretum, Haldwani; 16 (Sal associate experimental site, Lalkuan)	217	Medicinal	Western Peninsula and Myanmar
35.	<b>Phyllanthaceae;</b> <i>Flueggea microcarpa</i> Blum.	 Rithola		Lalkuan	6	Shyampur	6350										6356	385(Riparian plot); 14 (Miyawaki, Haldwani); 78 approx. (Mixed biodiversity plot, Lalkuan; 10 (Public Health Garden)	6843	Medicinal	India , Myanmar
36.	<b>Malvaceae;</b> <i>Helicteres isora</i> L.	 Marorfali																150 (Riparian plot); 28 (Medicinal conservator, Haldwani)	178	Medicinal	India , Pakistan, Nepal and Myanmar







37.	<b>Rhamnaceae;</b> <i>Ziziphus mauritiana</i> Lam.	 Ber																100(Riparian plot); 2 (Arboretum, Haldwani); 16,(Sal associate experimental site, Lalkuan)	118	Edible	Indo Malaysian region of SE. Asia.	
38.	<b>Viburnaceae;</b> <i>Viburnum cotinifolium</i> Don.	 Guiya		Saritataal	235	Patalthod	100											335	2(Arboretum Gaja)	337	Medicinal	Near endemic
39.	<b>Fabaceae ;</b> <i>Meizotropis pellita</i> (Hook.f. ex Prain) sanjappa	 Patwa	Threatened State Biodiversity Board) Endangered (Research Paper)	Saritataal	100													100	2(Arboretum Gaja)	102	Antimicrobial	Endemic to Patwadangar (Nainital)
40.	<b>Fabaceae ;</b> <i>Desmodium gyrans</i> (L.) DC.	 Dancing Plant																	5 (Bhujiyaghat Aromatic plants); 1 (Arboretum, Haldwani); 6 (Conservatory plot, Haldwani)	12	Ornamental	Tropical Asia
41.	<b>Rutaceae;</b> <i>Murraya koenigii</i> Spreng.	 Kadhipatta		Lalkuan	6	Bhujiyaghat	5											11	2(Bhujiyaghat Aromatic plants); 1 (Arboretum, Haldwani); 13 Miyawaki experiment	27	Spice	Native to India
42.	<b>Theaceae ;</b> <i>Camellia sinensis</i> (L.) Kuntze	 Chai	Data deficient (IUCN)	Lalkuan	2													2	1 Bhujiyaghat (Aromatic plants); 1 (Arboretum, Haldwani); 2 (Mixed biodiversity plot, Lalkuan)	6	Beverage	Northeast India, Assam, Upper Myanmar, China, Sikkim

43.	<b>Apocynaceae;</b> <i>Tabernaemontana divaricata</i> R.Br.ex Roem. & Schult.	 Chandni																5 Bhujiyaghat (Aromatic plants)	5	Ornamental	Native to India
44.	<b>Verbenaceae;</b> <i>Lippia alba</i> (Mill.) N.E.Br. ex Britton & P. Wilson	 Lippia																10 Bhujiyaghat (Aromatic plants); 6 (Aromatic zone Lalkuan)	16	Medicinal and Aromatic	Native to southern Texas in the United States, Mexico
45.	<b>Malvaceae.</b> <i>Hibiscus rosa sinensis</i> L.	 Gurhal																20 (Gurhal vaatika, Haldwani); 1 (Arboretum Gaja); 15 (Public Health Garden)	36	Edible and Medicinal	East Asia
46.	<b>Primulaceae;</b> <i>Embelia robusta</i> Roxb.	 Waiwiding																8 (Miyawaki, Haldwani); 16 (Mixed biodiversity plot, Lalkuan)	24	Medicinal	East Asia, Sri Lanka, India and Malaysia
47.	<b>Sterculiaceae;</b> <i>Abroma augusta</i> (L.) L.f.	 UlatKambal	Lalkuan	24														8 (Miyawaki, Haldwani); 1 (Medicinal conservatory, Haldwani); 10 (Public Health Garden)	43	Medicinal	Sikkim, Khasia hills and Assam.
48.	<b>Solanaceae;</b> <i>Solanum indicum</i> L.	 Brahti																100 (Medicinal conservatory, Haldwani); 2000 approx. (Dashmool species experimental plot, Lalkuan); 10 (Public Health Garden)	2110	Medicinal	Tropical and Subtropical India.










49.	<b>Fabaceae;</b> <i>Tephrosia purpurea</i> (L.) Pers.	 Sarpunkha																150 (Medicinal conservatory, Haldwani) 10 (Public Health Garden)	160	Medicinal	India and Sri Lanka.
50.	<b>Fabaceae;</b> <i>Uraria picta</i> (Jacq.) Desv. ex DC.	 Prastparni	Collection from wild closed for the time being by Uttarakhand Government.															80 (Medicinal conservatory, Haldwani); 700 (approx.) (Dashmool species, Lalkuan); 10 (Public Health Garden)	790	Medicinal	Tropical Africa, India, China and Indonesia.
51.	<b>Apocynaceae;</b> <i>Calotropis procera</i> (Aiton) W.T. Aiton	 Aakh																1 (Nav Graha Vaatika) ; 1 (Nakshtra Vaatika) 12 (Public Health Garden)	14	Medicinal	N. Africa, W. Asia South Asia and Indochina.
52.	<b>Oleaceae;</b> <i>Jasminum sambac</i> (L.) Aiton	 Bela / Mogra																4 (Aromatic zone, Haldwani); 30 (Aromatic species project site, Lalkuan)	34	Aromatic	Tropic Asia from the Indian subcontinent to Southeast Asia.
53.	<b>Oleaceae;</b> <i>Jasminum officinalis</i> L.	 Chameli																4 (Aromatic block, Haldwani); 1 (Aromatic species project site, Lalkuan)	5	Aromatic	India, Nepal, Pakistan and Himalayas .

54.	<b>Rutaceae;</b> <i>Murraya paniculata</i> (L.) Jack	 Mano Kamini																4 (Aromatic block, Haldwani); 4 (Aromatic species project site, Lalkuan)	8	Aromatic	Southeast Asia and China		
55.	<b>Tiliaceae;</b> <i>Grewia sapida</i> Roxb.	 Falsa		Lalkuan	52													52	1 (Arboretum, Haldwani); 150 approx. (Lalkuan research range, Lalkuan)	153	Edible	Indian subcontinent	
56.	<b>Liliaceae;</b> <i>Asparagus racemosus</i> Willd.	 Satavar	Limited collection allowed by Uttarakhand Government	Kalika	10	Dwarson	15	Gaja	150	Bhujiyaghat	100							275	18 (Arboretum, Haldwani) 20 (Public Health Garden)	313	Medicinal	India	
57.	<b>Moraceae;</b> <i>Cudrania javanesis</i> Trec.	 Dammar		Lalkuan	8														1 (Arboretum, Haldwani)	1	Edible	Asia, Africa and Australia	
58.	<b>Rhamnaceae;</b> <i>Ziziphus oenoplia</i> (L.) Mill.	 Makoh ber		Lalkuan	6														6	16 (Sal associate experimental site); 15 (Shrub conservatory, Lalkuan)	37	Edible and Medicinal	Tropical and subtropical Asia and Australasia
59.	<b>Caesalpiniaceae;</b> <i>Caesalpinia bonduc</i> L.	 Latakaranj	Endangered (IUCN ) Environment Protection and Biodiversity Conservation Act 1999	Lalkuan	2														2	8 (Sal Associate Experimental plot, Lalkuan)	10	Medicinal	India (Nicobar Islands) and Sri Lanka.






60.	<b>Rosaceae;</b> <i>Rosa damascena</i> var. Ranisahiba	 Gulab rani sahiba																12 (Aromatic species project site, Lalkuan)	12	Perfumery		
61.	<b>Asteraceae;</b> <i>Artemisia absinthium</i> L.	 Common wormwood		Saritataal	60													60	44 (Aromatic species project site, Lalkuan)	104	Medicinal & Aromatic	Native to temperate regions of Eurasian and Northern Africa.
62.	<b>Malvaceae;</b> <i>Abelmoschus moschatus</i> Medik	 Kasturi bhindi																	30 (Aromatic species project site, Lalkuan)	30	Medicinal and Perfumery	Asia and Australia.
63.	<b>Oleaceae;</b> <i>Jasminum auriculatum</i> Vahl	 Juhi																	20 (Aromatic species project site, Lalkuan); 2 (Aromatic zone Haldwani)	22	Aromatic and Religious	Indian subcontinent
64.	<b>Rubiaceae;</b> <i>Gardenia jasminoides</i> J.Ellis	 Gandhraj																	10 (Aromatic species project site, Lalkuan)	10	Aromatic	Asia, India, Myanmar, Vietnam, Japan and Bangladesh
65.	<b>Mimosaceae;</b> <i>Acacia benthamii</i> Meisn.																		2(Arboretum at Gaja )			Native to Western Australia

66.	<b>Verbenaceae;</b> <i>Vitex negundo</i> L.	 Nirgundi	Least concern (IUCN)	Lalkuan	141	Tangsa	100	kalika	480	Dwarson	270	Gaja	10	Bhujiyaghat	39	Shyam pur / Kalsi/ Jollygrant	405/220/1006	26+71	1(Arboretum Gaja); 100 (Riparian plot); 5 Bhujiyaghat (Aromatic plants); 1 (Arboretum, Haldwani); 28 (Medicinal conservatory, Haldwani); 200 Approx. (Mixed biodiversity plot, Lalkuan); 15 (Public Health Garden)	2805	Medicinal	Native to India
67.	<b>Liliaceae;</b> <i>Asparagus curillus</i> Buch. Ham. ex Roxb.	 Satawar		Tangsa	27	Kalsi	290											317	50 (Riparian plot)	367	Medicinal	Near Endemic
68.	<b>Rhamnaceae;</b> <i>Rhamnus virgatus</i> Roxb.	 Chaduel		Sariataal	795	Lalkuan	5											800	1 (Arboretum Gaja); 1(Arboretum Gaja)	802	Edible and Medicine	Pakistan, Nepal, Bhutan.
69.	<b>Anacardiaceae;</b> <i>Rhus parviflora</i> Roxb.	 Tungla																	1(Arboretum Gaja)	1	Edible	Himalayas
70.	<b>Fabaceae;</b> <i>Indigofera pulchella</i> Roxb.	 Sakina		Dwarson	534	Kalika	628	Lohathal	10									1172	1(Arboretum Gaja)	1173	Medicinal and Edible	Near Endemic







71.	<b>Rhamnaceae;</b> <i>Ziziphus xylopyrus</i> Wall.	 Kathber																16 (Sal associate experimental site, Lalkuan); 5 (Shrub conservatory, Lalkuan)		21	Medicinal and edible	Indian Subcontinent		
72.	<b>Rubiaceae;</b> <i>Coffea arabica</i>	 Coffee	Endangered (IUCN)	Lalkuan	1	Haldwani	1											2			Edible	Southern Africa and tropical Asia.		
73.	<b>Lythraceae;</b> <i>Lawsonia inermis</i> L.	 Mehendi																		1 (Arboretum, Haldwani) 10 (Public Health Garden)		11	Dye	South Africa, and Sudan
74.	<b>Apocynaceae</b> <i>Gomphocarpus physocarpus</i>			Patalthod	60													60			60	Medicinal	Exotic	
75.	<b>Buxaceae</b> <i>Buxus wallichiana</i>	 Papdi		Patalthod	200	Kalika	20											220			220	Medicinal and Toy making	Native to Eurasia	
76.	<b>Eleagnaceae</b> <i>Elaegnus parvifolia</i> D. don	 Gwen		Patalthod	100													100			100	Medicinal and Food	Native to Asia	







77.	<b>Caprifoliaceae</b> <i>Leycesteria formosa</i>	 Bhekan		Patalthod	30											30			30	Food purpose	China to the Himalaya
78.	<b>Rubiaceae;</b> <i>Rubus paniculatus</i> Sm.	 Kala hisalu		Dwarson	20	Saritalaal	300									320	15 (Public Health Garden)		335	Medicinal	Indian Subcontinent
79.	<b>Apocynaceae;</b> <i>Gymnema sylvestre</i>	 Gurmar		Haldwani	2											2	10 (Public Health Garden)		12	Medicinal	Native to tropical Asia
80.	<b>Malvaceae;</b> <i>Sida cordifolia</i>	 Bala		Haldwani	2											2	10 (Public Health Garden)		12	Medicinal	Native to India
81.	<b>Goodeniaceae</b> ; <i>Scaevola taccada</i>	 Beach cabbage		Haldwani	1											1				Edible and Medicinal	Native to Indian and Pacific Ocean region
82.	<b>Caprifoliaceae</b> ; <i>Abelia grandiflora</i>	 Glossy abelia		Haldwani	4											4			4	Aromatic	Native to eastern Asia
83.	<b>Acanthaceae;</b> <i>Beloperone guttata</i>	 Shrimp plant		Haldwani													10 (Pollinator Park)		10	Ornamental	Native to Mexico



84.	<b>Fabaceae;</b> <i>Calliandra brevipes</i>	 Pink powder puff		Haldwani	6												6			6	Orna menta 1	Native to South America	
85.	<b>Hydrangeacea e;</b> <i>Hydrangea macrophylla</i>			Haldwani	12	Kalika	5	Dwars on	5	Gaja	40							62			62	Orna menta 1	Native to Japan
86.	<b>Euphorbiacea e;</b> <i>Euphorbia cotinifolia</i>			Haldwani	12													12			12	Orna menta 1	Native to Mexico
87.	<b>Theaceae;</b> <i>Camellia japonica</i>	 Japanese camellia		Haldwani	8	Lalkuan	4	Kalika	6	Dwa rson	10							28			28	Orna menta 1	Native to China and Japan
88.	<b>Euphorbiacea e;</b> <i>Acalypha wilkesiana</i>	 Copperleaf		Haldwani	3													3			3	Medi cinal	Native to Fiji
89.	<b>Rosaceae;</b> <i>Spiraea thunbergii</i>	 Thunberg spiraea		Haldwani															2 (Arboretum Haldwani)		2	Edibl e	Native to East China and Japan
90.	<b>Fabaceae;</b> <i>Indigofera tinctoria</i>	 True indigo		Haldwani	6													6			6	Sourc e of Indig o Dye	Naturalize d in tropical and temperate Asia

91.	<b>Plumbaginaceae,</b> <i>Plumbago indica</i>	 Red Chitrak		Haldwani	10											10	10 (Public Health Garden)		20	Medicinal	Native to Southeast Asia, Indonesia, Philippines, and Yunnan in southern China.
92.	<b>Apocynaceae;</b> <i>Carissa carandas</i>	 Karunda		Haldwani												10	6 (Public Healthn Garden)		16	Edible and Medicinal	Native to India
93.	<b>Magnoliaceae;</b> <i>Magnolia liliiflora</i>	 Lily magnolia		Kalika	78											78	10 (Aromatic Project Site)		88	Ornamental	Native to southwest China
94.	<b>Verbenaceae;</b> <i>Clerodendrum chinense</i>	 Chinese Glory Bower		Lalkuan	9											9			9	Medicinal	Native to Nepal, eastern Himalayas, Andaman & Nicobar southeast China, Asia, and Malesia.
95.	<b>Burseraceae;</b> <i>Commiphora wightii</i>	 Guggal	Critically Endangered (IUCN)	Lalkuan	2											2	8 (Aromatic species project site, Lalkuan); 5 (Public Health Garden)		15	Medicinal	Found in Pakistan and India.
96.	<b>Fabaceae ;</b> <i>Cassia tora</i>	 Panwar		Lalkuan	6											6			6	Medicinal	Native range is in Central America.
97.	<b>Myrtaceae;</b> <i>Pimenta dioica</i>	 Jamaica pepper		Lalkuan	40											40	25 (Aromatic species project site)		65	Aromatic	Native to Greater Antilles, southern Mexico, and Central America.









98.	<b>Solanaceae;</b> <i>Cestrum diurnum</i>	 Din Ka Raja																10 (Aromatic species project site)		9	Aromatic	Native to the West Indies.	
99.	<b>Verbenaceae;</b> <i>Clerodendrum wallichii</i>	 Bridal Veil		Haldwani	10													10		10	Ornamental	Native to North East India	
100.	<b>Asteraceae;</b> <i>Ayapana triplinervis</i>	 Ayapana																10 (Aromatic species project site)		10	Aromatic	Originally native to Brazil.	
101.	<b>Verbenaceae;</b> <i>Holmskioldia sanguinea</i>	 Chinese hat plant		Gaja	200													200	15(Palmetum Haldwani)		215	Ornamental	Native to the Himalayan lowlands
102.	<b>Pandanaceae;</b> <i>Pandanus amaryllifolius</i>	 Pandanus																	5 (Aromatic species project site, Lalkuan)		5	Perfume industry	
103.	<b>Polygonaceae;</b> <i>Rumex hastatus</i>																		20 (Gaja) Wild flowers and 20 medicinal beds; 10 Public Health Garden		50	Medicinal	Eurasia and North Africa.
104.	<b>Anacardiaceae;</b> <i>Cotinus cogyria Scop.</i>					Tangsa	20											20			20	Ornamental	Himalayas to northern China






105.	<b>Asteraceae;</b> <i>Artemisia vulgaris</i>	 Common mugwort																20 Bhujiyaghat (Aromatic plants); 10 Public Health Garden	30	Aromatic & Medicinal	Europe , Asia, North Africa and Alaska
106.	<b>Asteraceae;</b> <i>Artemisia indica</i>	 Indian wormwood																20 Bhujiyaghat (Aromatic plants)	20	Aromatic & Medicinal	India and East Asia
107.	<b>Euphorbiaceae:</b> <i>Euphorbia pilosa</i>	 Dudhya						Devvan	25								25		25		
108.	<b>Euphorbiaceae ;</b> <i>Baliospermum montanum</i>	 Danti																10 (Public Health Garden)	10	Medicinal	Sub-Himalayan tracts from Khasi Hills to Kashmir.
109.	<b>Apocynaceae;</b> <i>Catharanthus roseus</i>	 Sadabahar																20 (Public Health Garden)	20	Medicinal and Ornamental	Endemic to Madagascar
110.	<b>Euphorbiaceae;</b> <i>Ricinus communis . L</i>	 Castor bean																10 (Public Health Garden)	10	Medicinal	Indigenous to the southeastern Mediterranean Basin, Eastern Africa, and India








111.	<b>Fabaceae;</b> <i>Clitoria ternatea</i>	 Aparajita		Gaja	1251	Bhujy ghat	699											1950	10 (Public Health Garden)		1960	Medicinal	Native to Southeast Asia
112.	<b>Asteraceae;</b> <i>Plantago lanceolata</i>	 Rasana																	10 (Public Health Garden)		10	Medicinal	Native to S. Iran to Indian Subcontinent.
113.	<b>Amaryllidaceae;</b> <i>Bulbine asiatica</i>																		10 (Public Health Garden)		10	Medicinal	Native to tropical southeastern Asia
114.	<b>Apocynaceae;</b> <i>Rauwolfia tetraphylla</i>	 Wild Snakeroot																	10 (Public Health Garden)		10	Medicinal	Native to tropical America
115.	<b>Verbenaceae;</b> <i>Callicarpa macrophylla</i>	 Priyangu		Kasi	70													70	10 (Public Health Garden)		80		Himalaya, from Kashmir to Bhutan, India, Burma and S. China
116.	<b>Malvaceae;</b> <i>Sida rhombifolia</i>	 Mahbala																	10 (Public Health Garden)		10	Medicinal	Native to the Old World tropics and subtropics
117.	<b>Malvaceae;</b> <i>Abutilon indicum</i>	 Atibala																	10 (Public Health Garden)		10	Medicinal	Found on tropical and subtropical zones



125.	<b>Lamiaceae;</b> <i>Origanum 'French'</i>	 French Marjoram																10 (Aromatic species project site, Lalkuan)	10	Spice, food preservative	-
126.	<b>Oleaceae;</b> <i>Jasminum sambac var. 'Grand Duke of Tuscany'</i>	 Butt Mogra																10 (Aromatic species project site, Lalkuan)	10	Perfumery	Native to India and Iran
127.	<b>Rubiaceae;</b> <i>Gardenia jasminoides 'Radicans'</i>	 Anant		Gaja	150												150	10 (Aromatic species project site, Lalkuan)	160	Perfumery	Native to southern China and Japan
128.	<b>Linaceae;</b> <i>Linum usitatissimum</i>	 Alsi/Flax																40 (Food Forest, Lalkuan)	40	Edible	-
129.	<b>Fabaceae;</b> <i>Cajanus cajan</i>	 Arhar																45 (Food Forest, Lalkuan)	45	Edible	Native to Asia
130.	<b>Fabaceae;</b> <i>Cicer arietinum</i>	 Chana/Chickpea																40 (Food Forest, Lalkuan)	40	Edible	Native to western Asia

131.	<b>Cannabaceae;</b> <i>Cannabis sativa</i>	 Bhang/Hemp																5 (Public Health Garden)		5	Medicinal	Indigenous to Eastern Asia
132.	<b>Fabaceae;</b> <i>Alexandrian Senna</i>	 Alexandrian senna																5 (Public Health Garden)		5	Medicinal and ornamental	Native to Egypt
133.	<b>Lamiaceae;</b> <i>Vitex trifolia</i>	 Simpleleaf chastetree																5 (Public Healthn Garden)		5	Medicinal	Native to tropical East Africa
134.	<b>Solanaceae;</b> <i>Solanum lasiocarpum</i>	 Nightshade																10 (Public Healthn Garden)		10	Medicinal	Native to Indian subcontinent
135.	<b>Solanaceae;</b> <i>Solanum surattense</i>	Kanthkari 		Gaja	85													85		85		Himalayas, South-East Malaysia, Australia, and Polynesia
136.	<b>Hyperceaceae;</b> <i>Hypericum calycinum</i>	 Basant		Kalika	285													285		285	Medicinal	-----

137.	<b>Acanthaceae;</b> <i>Phlogacanthus thyrsiformis</i> (Roxb. ex Hardw.)Mabb.	 Chuwa		Lalkuan	5	Tangsa	3										8			8	Medi cinal	Uttarakha nd & North East	
138.	<b>Acanthaceae;</b> <i>Barleria prionitis</i>	 Peela Vasa		Kalsi	70													70	10 (Public Healthn Garden)		80	Medi cinal	Native to Island and Mainland Southeast Asia, China, the Indian Subcontine nt, the Arabian Peninsula and northeaste rn Africa.
139.	<b>Primulaceae;</b> <i>Embelia ribes</i>	 Vaividang																	10 (Public Healthn Garden)		10	Medi cinal	Widely distributed throughou t India.
140.	<b>Fabaceae;</b> <i>Senna alexandrina</i>	 Senna																	5 (Public Healthn Garden)		5	Medi cinal and Edibl e	Indigenou s to Sudan and Sinai.
141.	<b>Fabaceae;</b> <i>Sesbania sesban</i>	 Jayanti																	6 (Public Healthn Garden)		6	Medi cinal and Edibl e	Africa, through Arabia, southern Asia to Australia.




142.	<b>Tamaricaceae;</b> <i>Tamarix dioica</i>	 Jhau															10 (Public Healthn Garden); 1(Arboretum at Gaja )	11	Medi cinal and Edibl e	Native to Asia.	
143.	<b>Adoxaceae:</b> <i>Viburnum grandiflorum</i> L.	 Guiya	-----	Kalika	52												52	-----	52	Medi cinal	Native to Himalya region.
144.	<b>Solanaceae:</b> <i>Cestrum elegans</i> (Brongn.ex Neumann) Schltl.	 Wild jasmine	-----	kalika	105												105			orna mental	Native to warm temperate to tropical regions of the Americas.
145.	<b>Malvaceae:</b> <i>Hibiscus mutabilis</i> L.	 Confederate rose		kalika	65												65			Orna mental	Native to China
146.	<b>Asteraceae;</b> <i>Inula cuspidate</i> C.B Clarke	 jhuri	-----	Dwarso	110												110			Orna mental	Indian subcontinent
147.	<b>Berberidaceae</b> ; <i>Berberis asiatica</i>	Kilmora 		Gaja	718			Sariatal	1697								2415		2415		Himalayas
148.	<b>Pandanaceae;</b> <i>Pandanus furcatus</i> Roxb			Haldwani	1												1		1		Native to Indian Himalayan Region

















**IV. Bamboo / Ringal Species**







**Bamboo species are being conserved at Research Range Haldwani and Gopeshwar.**

S. No.	Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Uttarakhand Govt. / Indian Biodiversity Portal)	Nursery										Experiment Site	Preservation Plot	Grand Total	Use	Native Region	
				Nursery Name															Total
				1		2		3		4		5							
Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant										
1.	<b>Bambusoideae;</b> <i>Dendrocalamus hamiltonii</i>	 Hamiltonii Bans		Lalkuan	420	Shyampur	06							426	10 (Trishula comp. 1 K.W.L.D ); 131 (River range Kalsi); 900 (Bambusetum, Haldwani); 1080 (Bambusetum, Lalkuan)	2548	House frames	Native to Northeast Himalayas.	
2.	<b>Bambusoideae;</b> <i>Dendrocalamus strictus</i>	 Laathi bans		Shyampur	08	Shrikot	47696	Kalika	91	Dwarson	20	Kalika	80	47895	228 (Trishula comp. 1 K.W.L.D ); 91 (River range Kalsi); 104 (Arboretum Haldwani) 1300 (Bambusetum, Haldwani); 1075 (Bambusetum, Lalkuan)	50611	House frames	Native to Southeast Asia	
3.	<b>Bambusoideae;</b> <i>Phyllostachys edulis</i>	 Chinese Bans													153 (Trishula comp. 1 K.W.L.D ); 46 (River range Kalsi)	200	Textile industry	Native to China and Taiwan	







4.	<b>Bambusoideae;</b> <i>Thyrsostachys siamensis</i>	 Siamensis Bans		Shyampur	08								08	9(Trishula comp.1 K.W.L.D ); 450 (Bambusetum, Haldwani), 276 (Bambusetum, Lalkuan)	744	Shelter and basket making.	Native to Yunnan, Myanmar, Laos, Thailand and Vietnam.
5.	<b>Bambusoideae;</b> <i>Dendrocalamus membranaceus</i>	 Membranaceus Bans	Least Concern (IUCN)	Shyampur	03									9 (Trishula comp. 1 K.W.L.D ); 590 (Bambusetum, Haldwani); 958 (Bambusetum, Lalkuan)	1558	To control soil erosion.	Native to Northeastern Thailand
6.	<b>Bambusoideae;</b> <i>Thamnocalamus falconeri</i>	 Dev Ringal												25 (Trishula comp. 1 K.W.L.D ); 10 (Bambusetum, Haldwani)	36	Basket making	Himalayan Region.
7.	<b>Bambusoideae;</b> <i>Thamnocalamus spathiflorus</i>	 Tham Ringal		Patalhod	50								50	25 (Trishula comp. 1 K.W.L.D )	76	Agricultural use	Native to Himalayan Region.
8.	<b>Bambusoideae;</b> <i>Arundinaria falcata</i>	 Gol Ringal		Mandal	57271	Tangsa	5834	Devvan	1007				64112	24 (Trishula comp.1 K.W.L.D )	64137	Basket making	Native to Northwest Himalaya.
9.	<b>Bambusoideae;</b> <i>Chimonobambusa jaunsarensis</i>	 Sarur Ringal												19 (Trishula comp. 1 K.W.L.D )	20	Broom making	Native to China, Japan, Vietnam and Himalayas.

10.	<b>Bambusoideae;</b> <i>Bambusa bambos</i>			Lalkuan	210									127 (River range Kalsi); 10 (Bambusetum, Lalkuan)		347	Making bridges and for ladders	Native to Southeast Asia
		Kanta baans																
11.	<b>Bambusoideae;</b> <i>Bambusa vulgaris</i>		Least Concern (IUCN)	Shyampur	08								08	47 (River range Kalsi); 250 (Bambusetum, Haldwani); 480 (Bambusetum, Lalkuan )		785	Huts, Boats, Fences and Musical Instruments.	Native to Indochina and to the province of Yunnan in Southern China
		Baans																
12.	<b>Bambusoideae;</b> <i>Arundinaria falcata</i>			Patalhod	50								50			50	Basket and Handicraft	Native of the Northwest Himalaya
		Gud ringal																
13.	<b>Bambusoideae;</b> <i>Bambusa multiplex</i>			Lalkuan	360	Shyampur	05						365	450 (Bambusetum, Haldwani); 125 (Bambusetum, Lalkuan)		940	Fence	Native to China.
		Hedge bamboo																
14.	<b>Bambusoideae;</b> <i>Dendrocalamus longispathus</i>			Shyampur	02								02	600 (Bambusetum, Haldwani); 564 (Bambusetum, Lalkuan)		1166	Handicrafts and Timber	Native to Bangladesh, Myanmar, and Thailand.
15.	<b>Bambusoideae;</b> <i>Dendrocalamus asper</i>													450 (Bambusetum, Haldwani); 1253 (Bambusetum, Lalkuan)		1703	Construction and Edible	Native to Southeast Asia.
		Giant Bamboo																

16.	<b>Bambusoideae;</b> <i>Melocanna beccifera</i>	 Berry Bamboo		Shyampur	02									2	180 (Bambusetum, Haldwani); 1099 (Bambusetum, Lalkuan)		1279	Edible and Medicinal	Indian subcontinent
17.	<b>Bambusoideae;</b> <i>Dendrocalamus giganteus</i>	 Dragon bamboo	Least concern (IUCN)	Lalkuan	359									359	650 (Bambusetum, Haldwani); 670 (Bambusetum, Lalkuan)		1679	Construction	Native to Southeast Asia
18.	<b>Bambusoideae;</b> <i>Bambusa balcooa</i>	 Female bamboo													300 (Bambusetum, Haldwani); 235 (Bambusetum, Lalkuan)		535	Edible	Native to Northeast India and the Indian subcontinent.
19.	<b>Bambusoideae;</b> <i>Phyllostachys reticulata</i>			Lalkuan	135									135	750 (Bambusetum, Haldwani); 25 (Bambusetum, Lalkuan)		910	Medicinal	Native to China
20.	<b>Bambusoideae;</b> <i>Bambusa wamin</i>	 Buddha Bamboo		Lalkuan	240	Shyampur	04							244	650 (Bambusetum, Haldwani); 495 (Bambusetum, Lalkuan)		1389	Ornamental	Native to South China.
21.	<b>Bambusoideae;</b> <i>Bambusa nutans</i>														1050 (Bambusetum, Haldwani); 478 (Bambusetum, Lalkuan)		1528	Ornamental	Northeast India, Bangladesh, Myanmar nad Thailand.



22.	<b>Bambusoideae;</b> <i>Bambusa tulda</i>	 Indian timber bamboo													1100 (Bambusetum, Haldwani); 15 (Bambusetum, Lalkuan)		1115	Edible	Native to the Indian subcontinent, Indo china, Tibet, and Yunnan.
23.	<b>Bambusoideae;</b> <i>Phyllostachys nigra</i>														800 (Bambusetum, Haldwani); 126 (Bambusetum, Lalkuan)		926	Musical instrument	Native to Hunan Province of China.
24.	<b>Bambusoideae;</b> <i>Thyrsostachys oliveri</i>	 Oliveri													250 (Bambusetum, Haldwani)		250	Construction and Edible	Native of Myanmar
25.	<b>Bambusoideae;</b> <i>Bambusa polymorpha</i>														380 (Bambusetum, Haldwani)		380	Pulp, Paper and Construction	Native to Bangladesh, Laos, Myanmar, Thailand, Sri Lanka.
26.	<b>Bambusoideae;</b> <i>Bambusa pallida</i>	 Bakhal													560 (Bambusetum, Haldwani)		560	Basketry and Edible	Indian subcontinent
27.	<b>Bambusoideae;</b> <i>Bambusa chungii</i>	 White bamboo													90 (Bambusetum, Haldwani)		90	Construction and Ornamental	Found in Hong Kong, and distribution in Southern China and Vietnam.

28.	<b>Bambusoideae;</b> <i>Dendrocalamus brandisii</i>	 Velvet Leaf Bam													184 (Bambusetum)		184	Building material	Endemic to India (Bamboo Diversity of India: An update M.L. Sharma and Nirmala C. Department of Botany, Panjab University Chandigarh 160014)
29.	<b>Bambusoideae;</b> <i>Dinochloa andamanica</i>														95 (Bambusetum)		95	Ropes	Endemic to India (Bamboo Diversity of India: An update M.L. Sharma and Nirmala C. Department of Botany, Panjab University Chandigarh 160014)
30.	<b>Bambusoideae;</b> <i>Bambusa nigra</i>														25 (Bambusetum, Lalkuan)		25	Musical instruments	Native to China
31.	<b>Bambusoideae;</b> <i>Bambusa glaucophylla</i>	 Malay Dwarf													75 (Bambusetum, Lalkuan)		75	Ornamental	Native to Jawa
32.	<b>Bambusoideae;</b> <i>Dendrocalamus stocksii</i>														5 (Bambusetum, Lalkuan)		5	Furniture, Handicraft and Edible	Indian subcontinent

33.	<b>Bambusoideae;</b> <i>Bambusa sasa</i>														25 (Bambusetum, Lalkuan)		25	Medicinal	Native to Japan
34.	<b>Bambusoideae;</b> <i>Bambusa cacharensis</i>														3 (Bambusetum, Lalkuan)		3	Medicinal and Edible	Native to India
35.	<b>Bambusoideae;</b> <i>Oxytenanthera nigrociliata</i>	 Guada Bamboo													10 (Bambusetum, Lalkuan)		10	Edible and Construct ion	Native to Asia
36.	<b>Bambusoideae;</b> <i>Bambusa salarkhanii</i>			Lalkuan	10										10			Basketry	Himalaya to Indo China
37.	<b>Bambusoideae;</b> <i>Schizostachyum dullooa</i>			Lalkuan	9										9			Flute making	Native to Southeast Asia
38.	<b>Bambusoideae;</b> <i>Gigantochloa andamanica</i>		-	Lalkuan	3										3				














39.	<b>Bambusoideae;</b> <i>Gigantochloa atroviolacea</i>	 Java Black Bamboo	-	Lalkuan	3							3			3			Native to Java, Indonesia
40.	<b>Bambusoideae;</b> <i>Gigantochloa nigrociliata</i>	 Black Hair Bamboo		Lalkuan	3							3			3			
41.	<b>Bambusoideae;</b> <i>Melocanna baccifera</i>	 Berry Bamboo	-	Lalkuan	3							3			3			It is native to Bangladesh, Myanmar, India, and Thailand.
42.	<b>Bambusoideae;</b> <i>Ochlandra travancorica</i>	 Reed bamboo	-	Lalkuan	3							3			3			Endemic to the Western Ghats, India.
43.	<b>Bambusoideae;</b> <i>Bambusa variegata</i>		-	Lalkuan	3							3			3			
44.	<b>Bambusoideae;</b> <i>Gigantochloa albociliata</i>		-	Lalkuan	3							3			3			

45.	<b>Bambusoideae;</b> <i>Bambusa mizorameana</i>			Lalkuan	3							3			3						
46.	<b>Bambusoideae;</b> <i>Schizostachyum brachycladum</i>	 Sacred Bali Bamboo		Lalkuan	3							3			3						


## V. Wild Climber Species








Wild Climber Species are being conserved at Research Range, Haldwani and Dehradun.








S. No	Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Uttarakhand Govt. / Indian Biodiversity Portal)	Nursery								Total	Experiment Site	Preservation Plot	Grand Total	Use	Native Region
				Nursery Name													
				1		2		3		4							
				Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant						
1.	<b>Fabaceae;</b> <i>Pueraria tuberosa</i>	 Vidari kand										100 (RET plot and Riparian plot); 2 (Lata Pergola, Haldwani) 15 (Public Health Garden)		117	Medicinal	Native to India, Pakistan and Nepal.	
2.	<b>Fabaceae;</b> <i>Spatholobus parviflorus</i>	 Malan latta	Least concern(IUCN)									100 (RET plot); 2 (Lata Pergola, Haldwani)		102	Medicinal	Native to Sri Lanka	
3.	<b>Celastraceae;</b> <i>Celastrus paniculatus</i>	 Maalkangni		Lalkuan	7							50 (RET plot); 9 (Sal Associate Experimental plot, Lalkuan); 1 (Arboretum, Haldwani); 45 (Lantana Plot Kalsi)		105	Medicinal	Native to India	
4	<b>Convolvulaceae;</b> <i>Argyreia nervosa</i>	 Vidara										2 (Lata Pergola, Haldwani) 15 (Public Health Garden)		12	Medicinal	Native to India	
5	<b>Menispermaceae;</b> <i>Tinospora cordifolia</i>	 Giloy	Collection closed for the time being by Uttarakhand Government	Haldwani	400	Lalkuan	5	Tangsa	20	Kalika	5	410	2 (Lata Pergola, Haldwani)		427	Medicinal	Throughout the tropical region of India.

6	<b>Caesalpiniaceae;</b> <i>Bauhinia vahlii</i>	 Maalu										2 (Lata Pergola, Haldwani); 2 (Sal Associate Experimental plot)/ 1(Arboretum Gaja)	5	Medicinal and Fodder	India, Nepal and Bhutan.	
7	<b>Menispermaceae;</b> <i>Stephania glabra</i>	 Ganjaru										2 (Lata Pergola, Haldwani) 5 (Public Health Garden)	7	Medicinal	Native to India	
8	<b>Asclepiadaceae;</b> <i>Tylophora indica</i>	 Antamul	Lalkuan	6	Gaja	80						86	2 (Lata Pergola, Haldwani), 50 (RET plot, Shyampur)	138	Medicinal	Indigenous to India.
9	<b>Asclepiadaceae;</b> <i>Leptadenia reticulata</i>	 Jivanti											2 (Lata Pergola, Haldwani)	2	Medicinal	Distributed throughout Madagascar, Mauritius, Myanmar, and Sri Lanka.
10	<b>Convolvulaceae;</b> <i>Ipomoea turpethum</i>	 Nisoth											2 (Lata Pergola, Haldwani)	2	Medicinal	Native to Asia
11	<b>Rubiaceae;</b> <i>Paederia foetida</i>	 Gandhprasarni											2 (Lata Pergola, Haldwani) 15 (Public Health Garden)	17	Medicinal	Native to both temperate and tropical Asia, from India to Japan and South East Asia.








12	<b>Dioscoreaceae;</b> <i>Dioscorea</i> <i>belophylla</i>	 Turar										2 (Lata Pergola, Haldwani)		2	Medicinal and Edible	Native to Africa, Asia and northern Australia.
13	<b>Menispermaceae;</b> <i>Cissampelos</i> <i>pareira</i>	 Akanadi/ laghupatha										2 (Lata Pergola, Haldwani) 20 (Gaja medicinal beds)		22	Medicinal	Native to India and Africa.
14	<b>Apocynaceae;</b> <i>Ichnocarpus</i> <i>frutescens</i>	 Dudhlata										2 (Lata Pergola, Haldwani)		2	Medicinal	Native to China, India, Southeast Asia, and northern Australia.
15	<b>Smilacaceae;</b> <i>Smilax aspera</i>	 Chopachini										2 (Lata Pergola, Haldwani)		2	Medicinal	Himalayas, from Pakistan to Bhutan.
16	<b>Fabaceae;</b> <i>Mucuna</i> <i>pruriens</i>	 Kiwach										2 (Lata Pergola, Haldwani) 15 (Public Health Garden)		17	Medicinal	Native to Africa and tropical Asia.
17	<b>Apocynaceae;</b> <i>Hemidesmus</i> <i>indicus</i>	 Anantamul										2 (Lata Pergola, Haldwani) 10 (Public Health Garden)		12	Medicinal	It occurs over the greater part of India, from the upper Gangetic plain eastward to Assam
18	<b>Asclepiadaceae;</b> <i>Holostemma</i> <i>annulare</i>	 Chirvel										2 (Lata Pergola, Haldwani)		2	Medicinal	Native to southern Asia (China, Nepal, Pakistan, Kashmir, India, Sri Lanka, Myanmar, Thailand).

19	<b>Asclepiadaceae;</b> <i>Aristolochia indica</i>	 Hooka bel/ Dug bel										2 (Lata Pergola, Haldwani)		2	Medicinal	Southern India and also Sri Lanka.
20	<b>Capparidaceae;</b> <i>Capparis horrida</i>	 Aradanda										2 (Lata Pergola, Haldwani)		2	Medicinal	Indian subcontinent, Indo China, China and Malaysia.
21	<b>Fabaceae;</b> <i>Abrus precatorius</i>	 Ratti										2 (Lata Pergola, Haldwani)		2	Medicinal	Native to Asia and Australia.
22	<b>Moraceae;</b> <i>Ficus hederacea</i>	 Creeping Ficus										2 (Lata Pergola, Haldwani)		2	Medicinal	Native range is Himalaya to S. China and Indo China
23	<b>Araliaceae;</b> <i>Hedera helix</i>	 Common ivy										2 (Lata Pergola, Haldwani)		2	Medicinal	Native to Europe
24	<b>Asclepiadaceae;</b> <i>Cryptolepis buchananii</i>	 Kala bel										2 (Lata Pergola, Haldwani)		2	Medicinal	Native range is Indian Subcontinent to S. China and Indo China








25	<b>Smilacaceae;</b> <i>Smilax zeylanica</i>	 Kumarika										2 (Lata Pergola, Haldwani)		2	Medicinal	Native to parts of the Indian Subcontinent as well as in Myanmar, Malaysia, Java and Solomon Islands.
26	<b>Araceae;</b> <i>Rhaphidophora sp.</i>											2 (Lata Pergola, Haldwani)		2	Medicinal	
27	<b>Passifloraceae;</b> <i>Passiflora incarnata</i>	 Wild passion vine/ Rakhi bel										2 (Lata Pergola, Haldwani)/ 2 (Wild edible Plants Gaja) 2 (Public Health Garden)		6	Medicinal	Native to the Southeastern United States.
28	<b>Ranunculaceae;</b> <i>Clematis virginiana</i>											2 (Lata Pergola, Haldwani)		2	Medicinal	Native to North America.
29	<b>Fabaceae;</b> <i>Desmodium rotundifolium</i>											2 (Lata Pergola, Haldwani)		2	Medicinal	Native to North America
30	<b>Actinidiaceae;</b> <i>Actinidia deliciosa</i>	 Kiwi										2 (Lata Pergola, Haldwani)		2	Edible	Native to Southern China.
31	<b>Vitaceae;</b> <i>Cissus quadrangularis</i>	 Hadjod										30 (Aromatic Zone Lalkuan) 25 (Public Health Garden)		55	Medicinal	Native to tropical Asia, Arabia and much of Africa.








32	<b>Dioscoreaceae;</b> <i>Dioscorea alata</i>	 Water yam										478 (Patalhod)		478	Edible	Native to India.	
33	<b>Araceae;</b> <i>Scindapsus officinalis</i>	 Gajapippali		Kalsi	6									6	Medicinal	Native to Southeast Asia and Java.	
34	<b>Rosaceae;</b> <i>Rosa setigera</i>	 Jungli gulab											2 (Lata Pergola, Haldwani) 10 (Aromatic species project site, Lalkuan)		12	Medicinal	Native to Central and Eastern North America.
35	<b>Apocynaceae;</b> <i>Telosma cordata</i>	 Cowslip Creeper											2 (Lata Pergola, Haldwani)		2	Aromatic	Native to China and Indo China
36	<b>Vitaceae;</b> <i>Ampelopsis cantoniensis</i>	 											2 (Lata Pergola, Haldwani)		2	Medicinal	Native to China, Japan, Malaysia, Thailand, and Vietnam
37	<b>Caprifoliaceae;</b> <i>Lonicera periclymenum</i>	 Honeysuckle											2 (Lata Pergola, Haldwani); 10 (Aromatic Project Site Lalkuan)		12	Medicinal	Europe, North Africa and Turkey
38	<b>Asteraceae;</b> <i>Tarlmounia elliptica</i>	 Curtain Crepper											2 (Lata Pergola, Haldwani)		2	Medicinal	Native to India, Burma and Thailand










39	<b>Solanaceae;</b> <i>Lycium barbarum</i>	 Goji berry										2 (Lata Pergola, Haldwani)		2	Medicinal	Native to China
40	<b>Fabaceae;</b> <i>Wisteria frutescens</i>	 American wisteria										2 (Lata Pergola, Haldwani)		2	Medicinal	Native to North America
41	<b>Combretaceae;</b> <i>Combretum indicum</i>	 Madhu mali										2 (Lata Pergola, Haldwani); 10 (Aromatic Project Site Lalkuan); 10 (Public Health Garden)		22	Medicinal	Native to Asia
42	<b>Apocynaceae;</b> <i>Marsdenia floribunda</i>	 Madagascar Jasmine										2 (Lata Pergola, Haldwani)		2	Aromatic	Native to Madagascar
43	<b>Acanthaceae;</b> <i>Thunbergia mysorensis</i>	 Indian clock vine										2 (Lata Pergola, Haldwani)			Ornamental	Native to Southern tropical India
44	<b>Bignoniaceae;</b> <i>Campesic radicans</i>	 Trumpet vine										2 (Lata Pergola, Haldwani)			Ornamental	Native in eastern and southern United States
45	<b>Apocynaceae</b> <i>Hoya longifolia</i>	 Wax plant											1 (orchidarium at Gaja)	1	Ornamental	India ( Asia nations)





46	<b>Manispermaceae</b> <i>Stephania elegans</i>	 Ghindhadu		Patalhod	10							10			10	Medicinal	Native to Eastern and Southern Asia and Australia
47	<b>Gesneriaceae</b> <i>Aeschynanthus parviflorus</i>	 Sikkim Blushwort		Patalhod	10							10			10	Ornamental	Himalayas
48	<b>Smilacaceae</b> <i>Smilax elegans</i>	 Elegant Smilax		Patalhod	10							10			10	Ornamental	Himalayas
49	<b>Haemodaceae</b> <i>Hedera nepalensis</i>	 Hedera nepalensis		Patalhod	10							10			10	Ornamental	Himalayas
50	<b>Bignoniaceae;</b> <i>Begonia venusta</i>	 Flamevine											2 (Lata Pergola, Haldwani)		2	Medicinal	Native of Brazil
51	<b>Bignoniaceae;</b> <i>Dolichandra unguis cati</i>	 Cat's claw											2 (Lata Pergola, Haldwani)		2	Medicinal	Native to the tropical dry forest of Central America, South America and the Caribbean
52	<b>Fabaceae;</b> <i>Amphicarpaea bracteata</i>	 American Hog Peanut											2 (Lata Pergola, Haldwani)		2	Edible	Native to North America.
53	<b>Basellaceae;</b> <i>Basella alba</i>	 Bharatiye Palak											2 (Lata Pergola, Haldwani)		2	Medicinal	Native to Africa and Asia

54	<b>Apocynaceae;</b> <i>Strophanthus gratus</i> (Wall. & Hook.)	 Climbing Oleander										10 (Aromatic Projct Site, Lalkuan)		10	Medicinal	Native to tropical Africa
55	<b>Verbenaceae;</b> <i>Petrea volubilis var. albiflora</i> (Stand l.)	 White Queen's Wreath Vine										10 (Aromatic Projct Site, Lalkuan)		10	Ornamental	Native to Tropical America
56	<b>Apocynaceae;</b> <i>Trachelospermum jasminoides</i> (Lindl.) Lem.	 Star jasmine	Lalkuan	5								10 (Aromatic Projct Site, Lalkuan)		15	Medicinal	Native to eastern and southeastern Asia
57	<b>Convolvulaceae;</b> <i>Porana volubilis</i> Burm. Fil.	 Horse Tail Creeper	Lalkuan	5										5	Aromatic	Indo China to Malesia
58	<b>Fabaceae;</b> <i>Clitoria fragrans</i> Small.	 Pigeon wings										10 (Aromatic Projct Site, Lalkuan)		10	Aromatic	Endemic to Central Florida
59	<b>Apocynaceae;</b> <i>Vallaris solanaceae</i> (Roth) Kuntze	 Bread flower										10 (Aromatic Projct Site, Lalkuan)		10	Medicinal	Native to India and Burma
60	<b>Acanthaceae;</b> <i>Thunbergia alata</i>	 Black eyed Susan vine										12 (Aromatic Projct Site, Lalkuan)		12	Medicinal	Native to Eastern Africa

61	<b>Asteraceae;</b> <i>Senecio confusus</i>	 Mexican Flame Vine										10 (Aromatic Project Site, Lalkuan)		10	Ornamental	Native to Mexico, Central America and the West Indies	
62	<b>Apocynaceae;</b> <i>Chonemorpha fragrans</i>	 Frangipani Vine										6 (Aromatic Project Site, Lalkuan)		6	Medicinal	Native to China, India, Indonesia, Malaysia, Myanmar, Sri Lanka and Thailand.	
63	<b>Bignoniaceae;</b> <i>Mansoa alliacea</i>	 Garlic Vine										10 (Aromatic Project Site, Lalkuan)		10	Medicinal	Native to Northern South America, and has spread to Central America and Brazil.	
64	<b>Fabaceae;</b> <i>Abrus precatorius</i>	 Ratti		Lalkuan	5							5	10 (Public Health Garden)		15	Medicinal	Native to Asia and Australia
65	<b>Oleaceae;</b> <i>Jasminum dispersum</i>	 Pink Jasmine											10 (Aromatic Project Site, Lalkuan)		10	Medicinal	Native to West China and the Himalaya.
66	<b>Cactaceae;</b> <i>Pereskia aculeata</i>	 Barbados Gooseberry		+									12 (Aromatic Project Site, Lalkuan)		12	Medicinal	Native to tropical America.
67	<b>Piperaceae;</b> <i>Piper betle</i>	 Paan											12 (Aromatic Project Site, Lalkuan)		12	Medicinal	Originated in Southern and Southeast Asia.

68	<b>Piperaceae;</b> <i>Piper nigrum</i>	 Kali mirch										10 (Public Health Garden)		10	Medicinal	Native to present day South India,	
69	<b>Annonaceae;</b> <i>Artabotrys hexapetalus</i>	 Hari champa										10 (Aromatic Project Site, Lalkuan)		10	Medicinal	Found in India through to Burma, southern China and Taiwan.	
70	<b>Malpighiaceae;</b> <i>Hiptage benghalensis</i>	 Madhavi lata										10 (Aromatic Project Site, Lalkuan)		10	Medicinal	Native to India, Southeast Asia, Taiwan, and the Philippines.	
71	<b>Oleaceae;</b> <i>Jasminum polyanthum</i>	 Pink Jasmine										10 (Aromatic Project Site, Lalkuan)		10	Aromatic	Native to China and Myanmar.	
72	<b>Passifloraceae :</b> <i>Passiflora edulis</i>	 Passion fruit(krishna kamal)	Shyam pur	05								05	10 (Public Health Garden)		15	Edible and Medicinal	Native to southern Brazil through Paraguay and northern Argentina.
73	<b>Menispermaceae;</b> <i>Stephania rotundifolia</i>	 Genjadu					Devvan	03							03	Medicinal	Tropical to temperate Himalaya. India, China
74	<b>Apocynaceae;</b> <i>Gymnema sylvestre</i>	 Gurmar	Lalkuan	2									10 (Public Health Garden)		12	Medicinal	Native to Asia, Africa and Australia.







75	<b>Combretaceae;</b> <i>Combretum roxburghii</i> Spreng.	 Kalsi piper	Least Concern (IUCN)			Kalsi	15					15			15	Fooder	
76	<b>Cucurbitaceae;</b> <i>Trichosanthus tricuspidata</i>	 Indrayan				Kalsi	25					25	20 (Gaja medicinal beds); 10 (Public Health Garden)		55	Medicinal	From Pakistan to Bhutan
77	<b>Cucurbitaceae;</b> <i>Cyclanthera pedata</i>	 Ram karela											5(Gaja medicinal beds)		5	Edible fruit	Native to Endes
78	<b>Vitaceae;</b> <i>Vitis vulpina</i>	 Jangli angur											5 (Gaja medicinal beds)		5	Edible fruit	North America
79	<b>Cucurbitaceae;</b> <i>Momordica dioica</i>	 Kakod											15 (Public Health Garden)		15	Medicina and vegetable	Native to Southeast Asia
80	<b>Vitaceae;</b> <i>Vitis vinifera L.</i>	 Angoor											15 (Public Health Garden) 10 (Food Forest)		25	Edible and Medicinal	Native to the Mediterranean region, Central Europe, southwestern Asia to northern Iran.
81	<b>Convolvulaceae;</b> <i>Cuscuta reflexa</i>	 Amarbel											10 (Public Health Garden)		10	Medicinal	Native to the Indian Subcontinent
82	<b>Oleaceae;</b> <i>Jasminum trifoliatum</i>	 Mysore Malliage											10 (Aromatic Project Site)		10	Perfumer y, Cosmetic	India, Nepal, Sri Lanka, Bhutan and the Andaman Islands

83	<b>Oleaceae;</b> <i>Jasminum</i> <i>Grandiflorum</i>	 Jai										10 (Aromatic Project Site)		10	Perfumer y, Cosmatic	Native to South Asia, the Arabian peninsula, East and Northeast Africa and the Yunnan and Sichuan regions of China
84	<b>Ranunculaceae;</b> <i>Clematis</i> <i>ligusticifolia</i>	 Ranjai										10 (Aromatic Project Site)		10	Perfumer y, Cosmatic	Native to North America
85	<b>Fabaceae;</b> <i>Vigna radiata</i>	 Moong bean										50 (Food Forest)		50	Edible	Mainly cultivated in East, Southeast and South Asia.
86	<b>Fabaceae;</b> <i>Vigna mungo</i>	 Urad bean										30 (Food Forest)		30	Edible	Native to South Asia







- 1 Species is yet to be identified

## VI. Cane species

Cane species are being conserved in Forest Research Range Haldwani:






S. No	Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Uttarakhand Govt./ Indian Biodiversity Portal)	Nursery						Experiment Site	Preservation Plot	Grand Total	Use	Native Region	
				Nursery Name											Total
				1		2		3							
Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant										
1	<b>Arecaceae;</b> <i>Calamus tenuis</i>		Least Concern (IUCN); Lower risk (Renuka, 2001).							4 (Canetum, Haldwani)	4	Handicrafts and Edible	Native to India, Assam, Bangladesh, Bhutan, Cambodia, Laos, Myanmar, Thailand, Vietnam, Java and Sumatra		
2	<b>Arecaceae;</b> <i>Calamus viminalis</i>		Lower risk (Renuka, 2001).							4 (Canetum, Haldwani)	4	Timber	Native to India		
3	<b>Arecaceae;</b> <i>Calamus pseudotenuis</i>		Lower risk (Renuka, 2001).							4 (Canetum, Haldwani)	4	Timber and Edible	Native to India & Sri lanka		
4	<b>Arecaceae;</b> <i>Calamus longisetus</i>		Vulnerable (Renuka, 2001).							4 (Canetum, Haldwani)	4	Timber and Edible	Native to India		
5	<b>Arecaceae;</b> <i>Calamus erectus</i>									4 (Canetum, Haldwani)	4	Timber	Native to India		
6	<b>Arecaceae;</b> <i>Calamus inermis</i>		Critically endangered (Renuka, 2001).							4 (Canetum, Haldwani)	4	Timber	Native to India		










7	<b>Arecaceae;</b> <i>Calamus floribundus</i>									10 (Canetum) Haldwani		10	Timber	Native to India
8	<b>Arecaceae;</b> <i>Daemonorops jenkinsiana</i>									10 (Canetum) Haldwani		10	Timber and Edible	Native to India
9	<b>Arecaceae;</b> <i>Calamus rotang</i>									10 (Canetum) Haldwani		10	Timber and Medicinal	Native to India
10	<b>Arecaceae;</b> <i>Calamus shendurunii</i>									5 (Canetum) Haldwani		5	Furniture and handicraft industries	Endemic to Kerala and Tamil Nadu
11	<b>Arecaceae;</b> <i>Calamus travancoricus</i>									5 (Canetum) Haldwani		5	Medicinal	Native to India
12	<b>Arecaceae;</b> <i>Calamus hookerianus</i>									5 (Canetum) Haldwani		5	Timber	Native to India









## VII. Grass species









Grass species are being conserved at Forest Research Range Kalika.






S. No	Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Uttarakhand Govt. / Indian Biodiversity Portal)	Nursery								Total	Experiment Site	Preservation Plot	Grand Total	Use	Native Region
				Nursery Name													
				1		2		3		4							
Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant										
1.	<b>Poaceae;</b> <i>Cymbopogon winterianus</i> Jowitt ex Bor	 Java Ghas										50 (Dwarson ); 50 Bhujiyaghat (Aromatic plants); 8 (Aromatic species project site, Lalkuan)		108	Medicinal	Native to India.	
2.	<b>Poaceae;</b> <i>Cymbopogon martini</i> (Roxb.) W. Watson	 Rosa Ghas										25 (Dwarson); 50 Bhujiyaghat(Aromatic plants)		75	Medicinal	India and Indochina.	
3.	<b>Poaceae;</b> <i>Vetiver zizanoides</i> (L.) Nash	 Khas Ghas		Patalhod	50							60 (Dwarson): 5(Grass Demonstration Plot Shyampur); 50 Bhujiyaghat (Aromatic plants); 30 (Aromatic species project site, Lalkuan)		195	Medicinal and Aromatic	Native to India, Pakistan, Bangladesh and Sri Lanka.	
4	<b>Poaceae;</b> <i>Saccharum spontaneum</i> L.	 Kans Ghas										605 (Dwarson ); 5 (Grass demonstration plot, Haldwani); 5 (Grass Demonstration Plot, Shyampur)		615	Soil Conservation and Ornamental	Native to the Indian Subcontinent.	
5	<b>Poaceae;</b> <i>Festuca arundinacea</i> (Schreb.)	 Dolani Ghas										368 (Dwarson )		368	Soil Conservation	Native to Europe.	



6	<b>Poaceae;</b> <i>Lolium perrene</i> L.	 Rye Ghas										220 (Dwarson )		220	Soil Conservatio n	Europe, Asia and northern Africa.
7	<b>Poaceae;</b> <i>Bromus inermis</i> Leys	 Brom Ghas										220 (Dwarson )		220	Soil Conservatio n and Fodder	Native to Europe.
8	<b>Poaceae;</b> <i>Pennisetum purpureum</i> Schumach.	 Napiner Ghas										719 (Dwarson )		719	Soil Conservatio n and fodder.	Native to the African grasslands.
9	<b>Poaceae;</b> <i>Megathyrus maximus</i> (Jacq.) B.K. Simon & S.W.L.Jacobs	 Ginni Ghas		Dwarson	234	Kalsi	150					384	234 (Dwarson )	618	Soil Conservatio n and fodder.	Africa, Palestine and Yemen.
10	<b>Poaceae;</b> <i>Desmostachya bipinnata</i> (L.) Stapf	 Durva Ghas											335 (Dwarson ); 5 (Grass Demonstration Plot, Shyampur) 15 (Public Health Garden)	356	Soil Conservatio n	Northern Africa, Tropical Asia, Myanmar, Nepal and Pakistan.
11	<b>Poaceae;</b> <i>Pennisetum clandestinum</i> Hochst. ex Chiov.	 Kikuyi Ghas											300 (Dwarson Nursery )	300	Soil Conservatio n and Fodder.	East Africa.
12	<b>Poaceae;</b> <i>Cynodon dactylon</i> (L.) Pers.	 Doob Ghas											264 (Dwarson )	264	Soil Conservatio, Fodder and Religious purpose	Eastern hemisphere.
13	<b>Poaceae;</b> <i>Dactylis glomerata</i> L.	 Gucchi Ghas											575 (Dwarson )	575	Soil Conservatio n and Fodder.	Native to Europe, Temperate Asia, and northern Africa.

14	<b>Poaceae;</b> <i>Heteropogon contortus</i> (L.) P. Beauv. ex Roem. & Schilt.	 Kumaria ghas										457 (Dwarson )		457	Soil Conservation and Fodder.	Southern Africa, southern Asia, Northern Australia and North America.	
15	<b>Poaceae;</b> <i>Chrysopogon fulvus</i> (Spreng.) Chiov.	 Godiya Ghas										330 (Dwarson)		330	Soil Conservation and Fodder.	Tropical Asia and East Africa.	
16	<b>Poaceae;</b> <i>Arundinella nepalensis</i> Trin.	 Nalika Ghas										237 (Dwarson )		237	Soil Conservation	Africa, E. Asia India, Nepal, S China.	
17	<b>Poaceae;</b> <i>Setaria sphacelata</i> (Schum.)Stapf &C.E. Hubb.ex M.b.Moss	 Sita Ghas										200 (Dwarson )		200	Soil Conservation and Fodder.	Tropical and subtropical Africa.	
18	<b>Poaceae;</b> <i>Cymbopogon citrates</i> (DC.)Saapf,	 Lemon Ghas	Rare (as per ENVIS center on floral diversity)	Kalsi	150	Shyampur	50	Kalika	620			820	264 (Dwarson ); 100 (RET plot, Shyampur); 41 (Aromatic Grass zone, Haldwani); 19 (Aromatic species project site, Haldwani)		1244	Medicinal and Beverages.	Maritime Southeast Asia.
18A	<b>Poaceae;</b> <i>Cymbopogon citratus</i> var. Krishana	 Krishana grass											20(Aromatic species project site, Lalkuan)		20	Essential Oil	
19	<b>Poaceae;</b> <i>Thysanoleana maxima</i> (Roxb.) Kuntze	 Oass ghas											287 (Dwarson ); 4(Grass demonstration plot, Haldwani); 10 (Grass Demonstration Plot, Shyampur		301	Soil Conservation	China, India, Myanmar, Nepal and Sri Lanka.










20	<b>Poaceae;</b> <i>Agrostis stolonifera</i> L.	 Babila ghas	Least Concern ( as per IUCN Red list of Threatened species)									280 (DwarsonNursery ); 6 (Grass demonstation plot, Haldwani)	286	Soil Conservatio n and Biofilteratio n	Eurasia and Nort Africa.
21	<b>Poaceae;</b> <i>Eragrotis polsia</i> (L.)P. Beauv.	 Love Ghas										735 (Dwarson Nursery )	735	Soil conservation	Eurasia and Africa.
22	<b>Poaceae;</b> <i>Cortaderia selloana</i> (Schult. & Schult. f.) Asch. & Graebn.	 Pampas Ghas										15 (Dwarson Nursery )	15	Soil Conservatio n and Ornamental.	Southern America and Pampas region.
23	<b>Cyperaceae;</b> <i>Cyperus rotundus</i> L.	 Motha Ghas	Least Concern (as per IUCN Red list of Threatened species)									50 (Dwarson Nursery )	50	Medicinal	Africa, Southern and Central Europe and Southern Asia.
24	<b>Poaceae;</b> <i>Spartina pectinate</i> Bosc ex Link	 Piary ghas										50 (Dwarson Nursery )	50	Soil Conservatio n	North America, including Central and Eastern Canada.
25	<b>Cyperaceae</b> <i>Carex cruciata</i> Wahl.	 Kans Ghas										30 (Dwarson Nursery )	30	Soil Conservatio n	India, China, Nepal, Japan, Tibet and Myanmar.
26	<b>Poaceae;</b> <i>Miscanthus nepalensis</i> (Trinius) Hackel	 Fairy Ghas		Patalhod	100							35 (Dwarson Nursery)	135	Soil Conservatio n and Ornamental	Himalayas
27	<b>Poaceae;</b> <i>Muhlenbergia lindhmeri</i> Hitchc.	 Muhali Ghas										45 (Dwarson Nursery)	45	Soil Conservatio n and Ornamental	North America, northern Mexico and Texas.








28	<b>Poaceae;</b> <i>Setaria pumila</i> (Poir.) Roem. & Schult.	 Pigeon Ghas										60 (Dwarson Nursery)		60	Soil Conservation	Native to Europe, but it is known throughout the world as a common weed.
29	<b>Poaceae;</b> <i>Paspalum dilatatum</i> Poir.	 Dalis Ghas										55 (Dwarson Nursery)		55	Soil Conservation	Native to Brazil and Argentina.
30	<b>Poaceae;</b> <i>Panicum virgatum</i> L.	 Panic Ghas										18 (Dwarson)		18	Soil Conservation	Native to North America.
31	<b>Poaceae;</b> <i>Cymbopogon flexuosus</i> (Nees ex Steud.) W. Watson	 Lemon Krishna Ghas		Gaja	214						214	50 (Dwarson); 50 Bhujiyaghat (Aromatic plants); 66 (Aromatic species project site, Lalkuan); 5 (Public Health Garden)		390	Medicinal, Beverages and Perfumery	India, Sri Lanka, Myanmar and Thailand.
32	<b>Poaceae;</b> <i>Cymbopogon flexuosus</i> var. <i>kaveri</i>	 Kaveri nimbu grass										6(Aromatic species project site, Lalkuan)		6	Cooking	Developed by (CSIR CIMAP, Lucknow).
33	<b>Poaceae;</b> <i>Pennisetum orientale</i> L. C. Rich	 Bimausiya Ghas										60 (Dwarson ); 6 (Grass demonstration plot, Haldwani)		66	Soil Conservation	North West Asia and North Africa.
34	<b>Cyperaceae;</b> <i>Cyperus eragrostis</i> Lam.	 Sage Ghas										50 (Dwarson )		50	Soil Conservation	Europe, South Africa, North America and Himalaya.
35	<b>Poaceae;</b> <i>Saccharum arundinaceam</i> Retz	 Kans Ghas										8 (Dwarson )		8	Soil Conservation	India, Myanmar, Sri Lanka and Thailand.









36	<b>Poaceae;</b> <i>Elucine indica</i> (L.) Gaertn	 Piraliya Ghas											45 (Dwarson ) 10(Grass demonstration plot, Haldwani)		55	Soil Conservation and Edible	Distributed throughout the warmer areas of the world.
37	<b>Poaceae;</b> <i>Paspalum vaginatum</i> Sm.	 Salam ghas											60 (Dwarson )		60	Soil Conservation	Native to the Americas.
38	<b>Cyperaceae;</b> <i>Cyperus esculentus</i> L.	 Nut Ghas											40 (Dwarson )		40	Soil Conservation	Indian Subcontinent
39	<b>Poaceae;</b> <i>Agrostis idahoensis</i> Nash Syn. <i>A. tenuis</i> Sibth.	 Brant Ghas											30 (Dwarson )		30	Soil Conservation	Europe and parts of Western and Central Asia
40	<b>Poaceae;</b> <i>Erianthus giganteum</i> (Walter) P.Beauv	 Plum Ghas											20 (Dwarson )		20	Soil Conservation and Ornamental	New York, Kentucky, Florida.
41	<b>Poaceae;</b> <i>Tripsacum dactyloides</i> (L.) L.	 Fakachi Ghas											60 (Dwarso)		60	Soil Conservation	Eastern United States to northern South America
42	<b>Poaceae;</b> <i>Sorgham sp.</i>	 Chari Ghas											500 (Dwarson )		500	Fodder and Biofuels	
43	<b>Cyperaceae;</b> <i>Eriophorum comosum</i> (Wall.) Nees.												70 (Dwarson )		70	Soil Conservation	India, Nepal, China, Vietnam and Pakistan










44	<b>Poaceae;</b> <i>Spartina cynosuroides</i> (L.)Roth	 Big cordgrass		Kalsi	70						70			70	Forage	East Coast and Gulf Coast of the United States of America
45	<b>Poaceae;</b> <i>Phalaris arundinacea</i> L.	 Reed canary grass	Least Concern ( IUCN )									5 (Grass Demonstration Plot, Shyampur)		5	Ornamental and medicinal	Europe, Asia and Africa
46	<b>Poaceae;</b> <i>Saccharum bengalense</i> Retz.	 Sarkanda										5 (Grass Demonstration Plot, Shyampur)		5	Fodder	Northern India, Afghanistan, Pakistan and Iran
47	<b>Cyperaceae;</b> <i>Cyperus scarious</i> R. Br.	 Nagar Motha										5 (Grass Demonstration Plot, Shyampur) 15 (Public Health Garden)		20	Medicinal	Native to India's Madhya Pradesh. One of the most invasive weeds, world wide distribution
48	<b>Poaceae;</b> <i>Coix lacryma jobi</i> L.	 Vajanti										5 (Grass Demonstration Plot, Shyampur)		5	Medicinal	Southeast Asia
49	<b>Poaceae;</b> <i>Eulaliopsis binata</i> ( Retz.) C.E.Hubb.	 Bhabar grass										5 (Grass Demonstration Plot, Shyampur)		5	Ornamental and Paper Pulp	China, Nepal, India, Bhutan and Myanmar.
50	<b>Poaceae;</b> <i>Danthonia cachemyriana</i> Jaub. & Spac			Mandal	50						50			50	Soil conservation	India, Nepal China and Pakistan.
51	<b>Poaceae;</b> <i>Dactylis glomerata</i> L.											20 (Grass demonstration plot, Haldwani)		20	Soil Conservation and Fodder	Europe, temperate Asia and Northern Africa.



52	<b>Poaceae;</b> <i>Cymbopogon nardus (L.) Rendle</i>	 Citrolenna Ghas										22 (Aromatic grass zone, Haldwani); 10 (Aromatic Project Site)		32	Aromatic	Tropical Asia
53	<b>Poaceae;</b> <i>Cymbopogon schoenanthus Spreng.</i>	 Rosa grass										50(Aromatic species project site, Lalkuan)		50	Medicinal	Southern Asia and Northern Africa.
54	<b>Poaceae;</b> <i>Apluda mutica</i>	 Bhangura grass													Fodder	Native to Asia
55	Unidentified			Dwarson	75									75		
56	Unidentified			Dwarson	20									20		
57	Unidentified			Dwarson	70									70		
58	<b>Poaceae;</b> <i>Danthonia cachemyriana Jaub. &amp; Spac</i>		-	Mandal	50						50			50	Soil Conservation	India, Nepal China and Pakist
59	<b>Poaceae;</b> <i>Crysopogon gryllus</i>	 Salam Ghas		Patalhod	250						250			250	Fodder and House making	Native to India
60	<b>Poaceae;</b> <i>Thysanolaena maxima</i>	 Ons ghas		Patalhod	13						13			13	For broom making	Native to Asia

61	<b>Poaceae;</b> <i>Eragrostis unioniloides</i>	 Love grass		Patalthod	100							100			100	Fodder	Native to Asia
62	<b>Poaceae;</b> <i>Erinthus rufipilus</i>			Patalthod	100							100			100	Fodder	Native to Asia
63	<b>Poaceae;</b> <i>Typha elephantina</i>												5 (Grass Demonstration Plot, Shyampur); 2 Aquatic Demonstraruin Area (Haldwani)		7	Medicinal	Native range is Sahara to China
64	<b>Cyperaceae;</b> <i>Schoenoplectus lateralis</i> Roxb. (Sedge)												20 (Dwarson )		20	Soil Conservation	Europe to Central Siberia
65	<b>Poaceae ;</b> <i>Miscanthus sinensis</i> (Andersson)	 Zebra grass											5 (Dwarson )		5	Ornamental	Native to eastern Asia throughout most of China, Japan, Taiwan and Korea
66	<b>Poaceae;</b> <i>Phalaris arundinacea</i> ( L.)												10 (Dwarson )		10	Pollution control	Native to North America
67	<b>Aspargaceae;</b> <i>Ophiopogon planiscarpus</i> (Nakai)	 Mondo grass											10 (Dwarson )		10	Ornamental	Native to Japan.
68	<b>Poaceae;</b> <i>Imperata cylindrical</i> L.	 Cogon grass											20 (Dwarson )		20	Medicinal	Native to Asia, cogon grass ( <i>Imperata cylindrical</i> ) is common in the humid tropics and has spread to the warmer temperate zones worldwide.

69	<b>Poaceae;</b> <i>Pogonatherum crinitum</i> (Thunb)	 Komalromi											20 (Dwarson )		20	Soil Conservation	Native range is Madagascar, Tropical & Subtropical Asia to Marianas
70	<b>Cyperaceae;</b> <i>Fimbristylis dichotoma</i> (L)	 Ghueen											20 (Dwarson )		20	Soil Conservation	It is found in temperate to tropical regions worldwide
71	<b>Cyperaceae;</b> <i>Cyperus iria</i> (L)	 Motha											10 (Dwarson ) 15 (Public Health Garden)		25	Medicinal	It is native of tropical Asia and later widespread in subtropical Asia.
72	<b>Poaceae;</b> <i>Dichanthium annulatum</i> (Forssk)	 Marvel grass											20 (Dwarson )		20	Soil Conservation	It is a tropical grass originally from North Africa and India.
73	<b>Cyperaceae;</b> <i>Carex orthinopoda</i> Willd.												15 (Dwarson )		15	Ornamental	Its native range is Europe to Turkey
74	<b>Cyperaceae;</b> <i>Isolepis cernua</i> (Vahl) Roem & Schult	 Iso lapes grass											4 (Dwarson )		4	Ornamental	Native to many regions of the world, including parts of Australasia, Eurasia, Africa, and North and South America
75	<b>Cyperaceae;</b> <i>Cyperus compressus</i> L.												10 (Dwarson )		10	Medicinal	It is native of tropical Asia and later widespread in subtropical Asia.
76.	<b>Poaceae;</b> <i>Echinola colona</i> L.												8 (Dwarson )		8	Soil Conservation	It is Native to Tropical and Subtropical Asia

77	<b>Poaceae;</b> <i>Alloteropsis cimicina</i> C.presl	 Summer grass											20 (Dwarson )		20	Soil Conservation	It is Native to Tropical and Subtropical Asia
78.	Unidentified												20 (Dwarson )		20		
79.	<b>Poaceae;</b> <i>Cymbopogon distans</i> Spreng.												20 (Dwarson )		20	Soil Conservation	It is native to Warm Temperate and subtropical Asia.
80.	Unidentified												10 (Dwarson )		10		
81.	<b>Poaceae;</b> <i>Sporobolus indicus</i> (L)	 Smut grass											20 (Dwarson )		20	Soil Conservation	Native from Columbia.
82.	<b>Poaceae;</b> <i>Eulaliopsis binata</i> (Retz.) C.E Hubb												25 ( Dwarson)		25	Soil Conservation	Native range is Afghanistan to China.
83.	<b>Poaceae;</b> <i>Panicum grande</i>	 Panicum											10 (Dwarson)		10	Soil Conservation	Native from tropical Regions
84.	<b>Poaceae;</b> <i>Bromus arvensis</i> L.	 Brome grass											10 (Dwarson)		10	Soil Conservation	Native to Southern and Central Europe.
85.	<b>Poaceae;</b> <i>Eleusine aegyptiaca</i> L.	 Crowfoot grass		Haldwan i	10										10	Medicinal	Native to Africa

86.	<b>Poaceae;</b> <i>Aristida cyanantha</i> Steud.	 Lampa grass											10 (Dwarson)		10	Soil Conservation	Native Afghanistan to Nepal.
87.	<b>Poaceae;</b> <i>Sorghum halepense</i> (L)	 Jhonsan grass											12 (Dwarson)		12	Soil Conservation and Fooder	Native to Mediterranean Region.
88.	<b>Poaceae;</b> <i>Neyraudia arundinacea</i> (L)												10 (Dwarson)		10	Soil Conservation	Native to Subtropical Asia.
89.	<b>Poaceae;</b> <i>Chrysopogon gryllus</i> (L)												20 (Dwarson)		20	Soil Conservation	Native to Europe and Tropical, Temperate Asia.
90	Poaceae; <i>Triticum aestivum</i>	 Gehu											50 (Dwarson)		100	Edible	
91	Poaceae; <i>Zea mays</i>	 Makka											50 (Dwarson)		50	Edible	Mexico & Central America
92	Poaceae; <i>Dendrocalamus spp.</i>	 Bans											10 (Dwarson)		10	House frames	Native to Southeast Asia
93	Poaceae; <i>Eluscine indica</i>												50 (Dwarson)		50	Edible	







94	Poaceae; <i>Oryza sariva</i>	 Dhan/ Rice											50 ( Dwarson)		50	Edible	
95	Poaceae; <i>Hordeum vulgare</i>	 Jau/ Barley											50 ( Dwarson)		50	Edible/ Religious	Middle East
96	Poaceae; <i>Echinochola esculenta</i>	 Madira											50 ( Dwarson)		50	Edible	
97	Poaceae; <i>Cymbopgon spp. Var. Kaveri</i>												50 ( Dwarson)		50	Medicinal	
98	-----												10 ( Dwarson)		10		
99	Poaceae; <i>Muhlenbergia duthieana</i>												10 ( Dwarson)		10		
100	Poaceae; <i>Arundinella setosa</i>												10 ( Dwarson)		10	Fooder/ soil conservation	Tropical and subtropical Asia to N.Australia.
101	Poaceae; <i>Eullalia mollis</i>												20 ( Dwarson)		20	Ornamental.	Himalaya to Tibet

102	Unidentified											10 ( Dwarson)		10		
103	Unidentified											10 ( Dwarson)		10		
104	Unidentified											10 ( Dwarson)		10		
105	Unidentified											20 ( Dwarson)		20		
106	Unidentified											10 ( Dwarson)		10		
107	<b>Poaceae;</b> <i>Saccharum</i> <i>rufipilum</i>	 Gulabi kans	-	Patalhod	50						50	50		50	Medicinal/ Aromatic	Native to India, Pakistan, Bangladesh and Sri Lanka








- 13 Species are yet to be identified

### VIII. Orchid Species





Orchid Species are being conserved at Lumti (Pithoragarh Range), Gaja (Jeolikote Range) and Mandal (Gopeshwar Range).







S.No.	Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Uttarakhand Govt./ Indian Biodiversity Portal)	Nursery								Experiment Site	Preservation Plot	Grand Total	Use	Native Region	
				Nursery Name													Total
				1		2		3		4							
Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant										
1.	<b>Orchidaceae ;</b> <i>Calanthe plantaginea</i> Lind			Mandal	20							20		Ornamenta l	Western and Eastern Himalayas (India), Pakistan, Nepal and China.		
2.	<b>Orchidaceae;</b> <i>Bulbophyllum cariniflorum</i> Reichb.f.		Least concern (IUCN Red List)	Mandal	2							2		Ornamenta l	Western Himalayas (India), Pakistan, Nepal, China and Japan		
3.	<b>Orchidaceae;</b> <i>Calanthe tricarinata</i> Lindl.	 Syoru	Comes under Appendix II of CITES.	Mandal	10	Patalthod	30	Devvan	03			43	50 (Trishula comp.19 B K.W.L.D )	Medicinal	Western Himalayas (India), Pakistan, Nepal and China		
4.	<b>Orchidaceae;</b> <i>Coelogyne cristata</i> Lindl	 Gongya	Comes under Appendix II of CITES, Threatened(ENVIS)	Mandal	25	Jollygrant	5					30	200 (Orchid In situ Conservation cum demo plot Pithoragrah); 5 orchidarium, Gaja	Medicinal	Western and Eastern Himalayas (India), Nepal, Bhutan and China		
5.	<b>Orchidaceae;</b> <i>Coelogyne stricta</i> (D. Don) Schltr.		Comes under Appendix II of CITES	Mandal	20							20	Multiple (Khalla van panchayat ); 250(Orchid In situ Conservation cum demo plot Pithoragrah)	Ornamenta l	Western and Eastern Himalayas (India), Nepal and Myanmar.		
6.	<b>Orchidaceae ;</b> <i>Cymbidium iridioides</i> D.Don	 Iris Orchid	Comes under Appendix II of CITES	Mandal	20	Tangsa	10					30	Multiple (Khalla van panchayat ) 50 (Orchid In sit Conservation cum demo Plot ,Pithoragrah); 4 (Orchidarium, Haldwani)	Ornamenta l	Western Himalayas (India), Bhutan, Nepal, and Eastern Himalayas.		












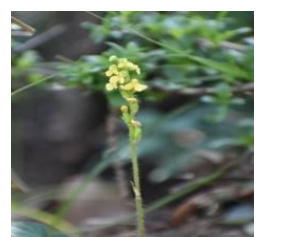
7.	<b>Orchidaceae;</b> <i>Dendrobium amoenum</i> Wall. ex Lindl.		Comes under Appendix II of CITES	Mandal	30	Dwarson	5	Shyampur	05			40	50(Orchid In situ Conservation cum demonstration plot, Pithoragrah); 2 (Orchidium, Shyampur)		92	Ornamenta 1	Western Himalayas (India), Bhutan, Nepal and Bangladesh.
8.	<b>Orchidaceae;</b> <i>Dendrobium fimbriatum</i> Hook. <b>Syn. D. normale</b> Falc.		Indeterminate ( ENVIS Endemic and Threatened plant Taxa of India); Comes under Appendix II of CITES	Mandal	30							30	Multiple (Khalla van panchayat ) 50(Orchid In situ Conservation cum demonstration plot Pithoragrah)		80	Ornamenta 1	Endemic Flowernig Plants of Uttarakhand (A Checklist) B.P. Uniyal.
9.	<b>Orchidaceae;</b> <i>Eria alba</i> Lindl.		Comes under Appendix II of CITES	Mandal	20							20	100 (Orchid In situ Conservation cum demonstration plot, Pithoragarh)		120	Ornamenta 1	Western Himalayas (India), Nepal and Bhutan.
10.	<b>Orchidaceae;</b> <i>Eria spicata</i> (D. Don) Hand. Mazz.			Mandal	15	Tangsa	4	Dwarson	5			24	Multiple (Khalla van panchayat )		24	Ornamenta 1	Western Himalayas (India), Vietnam, Laos, Nepal and China.
11.	<b>Orchidaceae;</b> <i>Goodyera repens</i> (L.) R. Br.	 Girwara		Mandal	6	Patalhod	30	Devvan	05			41	20 (Gaja) Orchidarium		61	Medicinal	Western and Eastern Himalayas (India), Nepal, Pakistan and China.
12.	<b>Orchidaceae;</b> <i>Habenaria intermedia</i> D.Don	 Riddhi	Comes under Appendix II of CITES ; Collection absolutely Prohibited by Uttarakhand Government	Mandal	4	Devvan	10	Sariatal	10			24	50(Ashtwarga species demo plot, Harkot, Munsyari); 40 (Orchidarium, Gaja)		114	Medicinal	Western Himalayas (India), Nepal and China.
13.	<b>Orchidaceae;</b> <i>Kingidium taenialis</i> (Lindl.) P.F.Hunt			Mandal	1							1			1	Ornamenta 1	Western Himalayas (India), Nepal and Myanmar.

14.	<b>Orchidaceae;</b> <i>Malaxis acuminata</i> D. Don	 Jeevak	Comes under Appendix II of CITES ; Collection absolutely Prohibited by Uttarakhand Government	Mandal	35	Dwarson	560					595	50(Ashtwarga spcies demo plot, Harkot, Munsyari); 20 (Orchidarium, Gaja) 455 (Herbal garden )	1120	Medicinal	Western and Eastern Himalayas (India), Nepal, China, Thailand and Myanmar.
15.	<b>Orchidaceae;</b> <i>Malaxis muscifera</i> (Lindl.) Kuntze	 Rishbhak	Vulnearable (IUCN ) ; Comes under Appendix II of CITES; Collection absolutely Prohibited by Uttarakhand Government	Mandal	2	Dwarson	5	Devvan	03			10	50(Ashtwarga spcies demo plot, Harkot, Munsyari)	55	Medicinal	Western and Eastern Himalayas (India), Nepal and Pakistan.
16.	<b>Orchidaceae;</b> <i>Neottia listeroides</i> Lindl.			Mandal	3							3		3	Ornamental	Western and Eastern Himalayas (India).
17.	<b>Orchidaceae;</b> <i>Pholidota articulata</i> Lindl.	 Jeevanti	Comes under Appendix II of CITES	Mandal	40	Tangsa	20					60	100(Orchid In situ Conservation cum demonstration plot, Munsyari); 5(Gaja) Orchidarium; 4 (Orchidarium, Haldwani ) 5 (Public Health Garden)	174	Medicinal	Western and Eastern Himalayas (India), China, Myanmar and Malayasia.
18.	<b>Orchidaceae;</b> <i>Habenaria edgeworthii</i> (Hook.f. ex Collett) R.K.Gupta	 Viriddhi	Collection absolutely Prohibited by Uttarakhand Government	Mandal	10	Devvan	10	Sariyatal	10			30	40 (Orchidarium, Gaja)	70	Medicinal	Western Himalayas (India), Nepal and Pakistan.
19.	<b>Orchidaceae;</b> <i>Satyrium nepalense</i> (Lindl.) Hook.f.	 Salam mishri	Comes under Appendix II of CITES ; Collection absolutely Prohibited by Uttarakhand Government	Mandal	55	Palthod	5	Devvan / Shyampur / Jollygrant	10 / 10/ 2	Sariyatal	10	92	50 (Orchidarium, Gaja)	142	Medicinal	Western and Eastern Himalayas (India), China, Myanmar and Nepal.
20.	<b>Orchidaceae;</b> <i>Thunia alba</i> (Lindl.)Rchb. f.		Comes under Appendix II of CITES	Mandal	5							5	50 (Orchid In situ Conservation cum demonstration plot); 2 (Orchidarium, Gaja)	57	Ornamental	Western Himalayas (India), Nepal and China.





21.	<b>Orchidaceae;</b> <i>Malaxis purpureum</i> (Lindl)Kuntze			Mandal	15						15			15	Ornamenta 1	Western Himalayas (India).
22.	<b>Orchidaceae;</b> <i>Habenaria stenopetala</i> Lindl.			Mandal	3						3			3	Ornamenta 1	Western Himalayas (India).
23.	<b>Orchidaceae;</b> <i>Platanthera cleavigera</i> Lindl.		Comes under Appendix II of CITES	Mandal	1	Patalhod	5				6			6	Ornamenta 1	Western Himalayas (India).
24.	<b>Orchidaceae;</b> <i>Bulbophyllum umbellatum</i> Lindl.			Mandal	30	Jollygrant	2				32			32	Ornamenta 1	Western Himalayas (India).
25.	<b>Orchidaceae;</b> <i>Oreorchis indica</i> (Lindl.) Hook. f.		Indeterminate ( ENVIS Endemic and Threatened plant Taxa of India)	Mandal	3						3			3	Ornamenta 1	Western Himalayas (India), Nepal, China and Taiwan.
26.	<b>Orchidaceae;</b> <i>Luisia trichorhiza</i> (Hook.) Blume		Comes under Appendix II of CITES	Mandal	20						20	50(Orchid In situ Conservation cum demonstration plot)		70	Ornamenta 1	Western Himalayas (India).
27.	<b>Orchidaceae;</b> <i>Vanda cristata</i> Linn.			Mandal	8						8	50 (Orchid In situ Conservation cum demonstration plot); 2 (Orchidarium, Haldwani ); 5 (Orchidarium, Gaja)		65	Ornamenta 1	Western Himalayas (India)
28.	<b>Orchidaceae;</b> <i>Habenaria aitchisonii</i> Rchb. f.			Mandal	6						6			6	Ornamenta 1	Western and Eastern Himalayas (India), and China.

29.	<b>Orchidaceae;</b> <i>Habenaria marginata</i> Colebr.			Mandal	4						4			4	Medicinal	Western and Eastern Himalaya (India), China and Yunnan.
		Haldya – Jari														
30.	<b>Orchidaceae;</b> <i>Acampe rigida</i> (Buch. Ham. ex Sm.) P.F.Hunt		Comes under Appendix II of CITES									50 (Orchid In situ Conservation cum demonstration plot)		50	Ornamental and Medicinal.	Indian subcontinent
31.	<b>Orchidaceae;</b> <i>Aerides odorata</i> Lour.		Endangered (IUCN Red List 3.1); Comes under Appendix II of CITES									50 (Orchid In situ Conservation cum demonstration plot); 4 (Orchidarium, Gaja)		54	Ornamental and Aromatic.	Western and Eastern Himalayas (India), Nepal and Bangladesh.
32.	<b>Orchidaceae;</b> <i>Herminium sp</i>		Comes under Appendix II of CITES	Patalthod	5						5			5	Medicinal	Western Himalayas
33.	<b>Orchidaceae;</b> <i>Liparis caespitosa</i> (Lam)Lindl.		Comes under Appendix II of CITES	Mandal	5							10 (Khalla Van Panchayat)		15	Ornamental	Africa, Himalayas and Southeast Asia.
34.	<b>Orchidaceae;</b> <i>Oberonia pachyrachis</i> Reichb.f. ex Hook. f.		Comes under Appendix II of CITES	Mandal	8							25(Orchid In situ Conservation cum demonstration plot, Pithoragarh); 12(Gaja Orchidarium); 2 (Orchidarium, Haldwani );4 (Khalla Van Panchayat )		51	Ornamental	Western Himalayas, Nepal, China Myanmar and Thailand.
35.	<b>Orchidaceae;</b> <i>Pholidota imbricata</i> Hook.		Comes under Appendix II of CITES	Mandal	10							3 Orchidarium (Haldwani); 5 (Khalla Van Panchayat)		18	Ornamental	Tropical and subtropical Asia to the southwest Pacific.








36.	<b>Orchidaceae;</b> <i>Rhynchostylis retusa</i> (L.) Blume	 	Comes under Appendix II of CITES	Mandal	1	Tangsa	2					4 Orchidarium (Haldwani); 1 (Khalla Van Panchayat) 2 (Public Health Garden); 2 (Orchidarium, Gaja)	12	Ornamenta 1	Indian subcontinent.
37.	<b>Orchidaceae;</b> <i>Spiranthis sinensis</i> (Pers.) Ames	 Spiranthis	Comes under Appendix II of CITES	Patalhod	5						5	50(RET demonstration plot, Harkot, Munsyari)	55	Medicinal	Western and Eastern Himalayas (India) Australia.
38.	<b>Orchidaceae;</b> <i>Phaius tankervilleae</i> (Banks) Blume	 Red cane orchid	Threatened Uttarakhand Biodiversity Board	Mandal	1	Tangsa	1				2	2 (RET plot, Shyampur), 10 (Haldwani ) Orchidarium, Haldwani)	14	Medicinal	Asia and islands in the Pacific Ocean.
39.	<b>Orchidaceae;</b> <i>Dendrobium auriculatum</i> Ames & Quisumb											2(Gaja Orchidarium)	2	Ornamenta 1	Native to Philippines.
40.	<b>Orchidaceae;</b> <i>Dendrobium sp.</i>											5 ( Orchidarium, Haldwani )	5	Ornamenta 1	
41.	<b>Orchidaceae;</b> <i>Paphiopedilum gratrixianum</i>											2(Orchidarium, Haldwani )	2	Ornamenta 1	Laos and Vietnam.
42.	<b>Orchidaceae;</b> <i>Vanda testacea</i> (Lindl.) Rchb.f.			Mandal	1						1	1 (Khalla van panchayat )	2	Medicinal	India , Myanmar
43.	<b>Orchidaceae;</b> <i>Liparis rostrata</i> Reichb.f.			Mandal	10	Devvan	03	Patalhod	5		18		18	Medicinal	India , Nepal and China





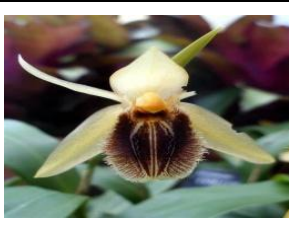
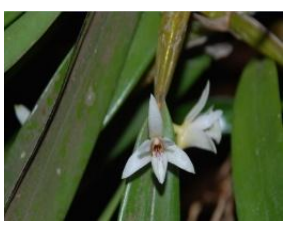
44.	<b>Orchidaceae;</b> <i>Calanthe puberula</i> Lindl.			Mandal	4						4			4	Medicinal	India , Pakistan , Nepal and China
45.	<b>Orchidaceae;</b> <i>Aerides rigida</i>											2 (Orchidarium, Haldwani )		2	Aromatic	Native to China, India, Assam, Bangladesh, Nepal, Sri Lanka, Andaman Islands, Cambodia, Laos, Myanmar, Thailand, Vietnam, Malaya, and the Philippines
46.	<b>Orchidaceae;</b> <i>Vanilla planifolia</i>											1 ( Orchidarium, Haldwani ) 2 (Public Health Garden)		3	Aromatic	Native to Mexico and Central America
47.	<b>Orchidaceae;</b> <i>Cymbidium erythraeum</i> Lindl.			Mandal	10						10			10	Ornamenta 1	India , Nepal
48.	<b>Orchidaceae;</b> <i>Pleione hookeriana</i> (Lindl.) Rollisson			Mandal	5						5			5	Medicinal	India , Nepal and Myanmar
49.	<b>Orchidaceae;</b> <i>Oreorchis micrantha</i> Lindl.			Mandal	3						3			3	Medicinal	India, Nepal and Bhutan
50.	<b>Orchidaceae;</b> <i>Zeuxine flava</i> (Wall. ex Lindl.)Trimen			Mandal	5						5			5	Ornamenta 1	India, Nepal and China

51.	<b>Orchidaceae;</b> <i>Goodyera procera</i> (Ker Gawl.) Hook			Mandal	10						10			10	Ornamenta 1	Indo – Malaya to east Asia
52.	<b>Orchidaceae;</b> <i>Paphiopedilum hirsutissimum</i> (Lindl. ex Hook. f.)Stein			Mandal	2						2			2	Ornamenta 1	Eastern Himalayas and Bhutan
53.	<b>Orchidaceae;</b> <i>Zygopetalum intermedium</i> Lodd. ex Lindl.			Mandal	2						2	1 ( Orchidarium, Haldwani		3	Aromatic	Peru, Bolivia and Brazil
54.	<b>Orchidaceae;</b> <i>Dienia cylindrostachya</i> Lindl			Mandal	4						4	25 (Orchidarium, Gaja)		4	Ornamenta 1	India , Nepal, China and Myanmar
55.	<b>Orchidaceae;</b> <i>Dendrobium monticola</i> P.F. Hunt & Su.			Mandal	10						10	10 (Khalla van panchayat )		20	Medicinal	Eastern Himalayas
56.	<b>Orchidaceae;</b> <i>Cypripedium cordigerum</i> D. Don	 Lady slipper orchid	Rare (Indian Biodiversity Portal) Comes under Appendix II of CITES	Mandal	8						8	4 (Mana van panchayat		12	Ornamenta 1	Near Endemic Himalayan region
57.	<b>Orchidaceae;</b> <i>Peristylus goodyeroides</i> (D. Don) Lindl.			Mandal	4						4	5(Gaja) Orchidarium		9	Medicinal	India , Sri – Lanka and Myanmar


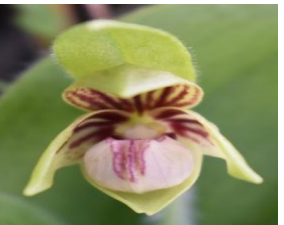





58.	<b>Orchidaceae;</b> <i>Dactylorhiza hatageria</i>	 Salampanja	Comes under Appendix II of CITES	Sariatal	5	Devvan	01	Manda 1	3			9			9	Medicinal	Near Endemic Himalayas from Pakistan to SE Tibet .
59.	<b>Orchidaceae;</b> <i>Habenaria edgeworthii</i> (Hook.f. ex Collett) R.K.Gupta	 Viriddhi	Collection absolutely Prohibited by Uttarakhand Government	Mandal	10							10	Mana Experiments 60		70	Medicinal	Western Himalaya( India),Nepal and Pakistan
60.	<b>Orchidaceae;</b> <i>Habenaria pectinata</i>	 Comb Habenaria		Patalthod	20							20	5 (Gaja) Orchidarium		25	Medicinal	Native range is Pakistan to China
61.	<b>Orchidaceae;</b> <i>Brachycorythis obcordata</i>			Patalthod	20							20			20	Ornamenta 1	Native range is Central India, Himalaya to Myanmar
62.	<b>Orchidaceae;</b> <i>Luisia tristis</i>	 Velvet orchid											2(Gaja) Orchidarium		2	Ornamenta 1	Native to India.
63.	<b>Orchidiaceae;</b> <i>Habenaria ensifolia</i> Lindl.	 Sword Leaf Habenaria		Mandal	5							5			5	Orname ntal	Himalayas
64.	<b>Orchidiaceae;</b> <i>Peristylus duthiei</i> (Hook.f.) Deva & Naithani.			Mandal	4							4			4	Ornamenta 1	Northwest Himalaya



65.	<b>Orchidiaceae;</b> <i>Herminium monorchis</i> (L.) R. Br.			Mandal	8						8			8	Ornamenta 1	Europe , Asia, France to Japan
66.	<b>Orchidiaceae;</b> <i>Pecteilis gigantea</i> Rafin	 Butterfly orchid	Threatened(State Biodiversity Board)	Mandal	2						2	3(Gaja) Orchidarium		5	Aromatic	Broad endemic to India
67.	<b>Orchidaceae;</b> <i>Cymbidium macrorhizon</i>		Comes under Appendix II of CITES	Patalthod	20						20			20	Ornamenta 1	Western Himalaya( India), Nepal and China
68.	<b>Orchidaceae;</b> <i>Diplomeris hirsuta</i>	 Snow Orchid	Comes under Appendix II of CITES Threatened (State Biodiversity Board); Vulnerable (Indian Biodiversity Portal)									2(Gaja) Orchidarium			Ornamenta 1	Endemic to Uttarakhand
69.	<b>Orchidiaceae;</b> <i>Pleione praecox</i> (Sm.) D. Don			Mandal	5						5			5	Ornamenta 1	West central Himalaya to China
70.	<b>Orchidiaceae;</b> <i>Bulbophyllum affine</i> Wall. ex Lindl.			Mandal	4						4	3 (Khalla van panchayat		7	Medicinal	West Central Himalaya to Nansei shoto
71.	<b>Orchidiaceae;</b> <i>Oberonia pyrifera</i> Lindl.			Mandal	2						2	3 (Khalla van panchayat		5	Ornamenta 1	Tropical Africa, southern Asia including India, China.






72.	<b>Orchidiaceae;</b> <i>Nervilia mackinnonii</i> Schltr.		Comes under Appendix II of CITES	Mandal	2						2			2	Ornamenta 1	Himalaya to China
73.	<b>Orchidiaceae;</b> <i>Platanthera stenantha</i> (J.D.Hooker) Soo			Mandal	2						2			2	Medicinal	Nepal to China
74.	<b>Orchidiaceae;</b> <i>Oreorachis petans</i> Lindl.		Comes under Appendix II of CITES	Mandal	3						3			3	Ornamenta 1	Eastern Asia
75.	<b>Orchidiaceae;</b> <i>Acampe papillosa</i> Lindl.		Comes under Appendix II of CITES	Mandal	1						1	1 (Khalla van panchayat 50(Orchid In situ Conservation cum demonstration plot)		52	Medicinal	Native to Eastern Himalayas.
76.	<b>Orchidiaceae;</b> <i>Bulbophyllum careyanum</i> (Hook) Spreng.		Comes under Appendix II of CITES	Mandal	5						5	10 (Khalla van panchayat100(Orchid In situ Conservation cum demonstration plot)		115	Ornamenta 1	Himalayas.
77.	<b>Orchidiaceae;</b> <i>Coelogyne ovalis</i> Lindl.		Comes under Appendix II of CITES	Mandal	3						4	4 (Khalla van panchayat200 (Orchid In situ Conservation cum demonstration plot)		207	Ornamenta 1	East Asia
78.	<b>Orchidiaceae;</b> <i>Eria lasiopetala</i> Ormerod		Comes under Appendix II of CITES	Mandal	5						5	5 (Khalla van panchayat 100 (Orchid In situ Conservation cum demonstration plot Pithoragarh)		110	Ornamenta 1	Bangladesh east to Hong kong and Southeast Asia.
79.	<b>Orchidiaceae;</b> <i>Flickingeria fugax</i> Seidenf.		Comes under Appendix II of CITES	Mandal	5						5	6 (Khalla van panchayat 50(Orchid In situ Conservation cum demonstration plot, Pithoragarh)		61	Medicinal	Indian subcontinent.



80.	<b>Orchidiaceae;</b> <i>Liparis viridiflora</i> (Blume) Lindl.		Comes under Appendix II of CITES	Mandal	6						6	10 (Khalla van panchayat		16	Ornamenta 1	Indian subcontinent to S. China.	
81.	<b>Orchidiaceae;</b> <i>Oberonia ensiformis</i> (Smith) Lindl.		Comes under Appendix II of CITES	Mandal	1						1	2 (Khalla van panchayat); 2 (Orchidarium, Gaja)		5	Ornamenta 1	Eastern Himalayas, Nepal .	
82.	<b>Orchidiaceae;</b> <i>Aeridis multiflora</i> Roxb.		Comes under Appendix II of CITES	Mandal	5	Dwarson	5					10	10Khalla VP 50(Orchid In situ Conservation cum demonstration plot); 4 (Orchidarium, Gaja)		74	Orname ntal	Southeast Asia.
83.	<b>Orchidiaceae;</b> <i>Gastrochilus calceolaris</i> (Buch. Ham. ex Sm.) D. Don		Critically endangered (IUCN)	Mandal	5							5	2 (Khalla Van Panchayat)		7	Orname ntal	Nepal, Bhutan, and China
84.	<b>Orchidiaceae;</b> <i>Cypripedium himalicum</i> Rolfe.	 Himalayan Venus	Endangered (IUCN ); Rare ( ENVIS Endemic and Threatened plant Taxa of India ) ; Rare (Indian Biodiversity Portal)	Mandal	4							4	12 Mana Van Panchayat		16	Orname ntal	Indian Himalayan region
85.	<b>Orchidiaceae;</b> <i>Dendrobium Sonia</i>												3 Orchidarium (Haldwami)		3	Ornamenta 1	Native to Java, Sumatra, Thailand and Vietnam.
86.	<b>Orchidiaceae;</b> <i>Phalaenopsis amphitrite</i>												3 Orchidarium (Haldwami)		3	Ornamenta 1	Native to Philippines

87.	<b>Orchidiaceae;</b> <i>Phalaenopsis</i> hybrid											3 Orchidarium (Haldwami)		3	Ornamental		
88.	<b>Orchidiaceae;</b> <i>Cypripedium</i> <i>elegans</i> Reichb.		IUCN red list Endangered Comes under Appendix II of CITES	Mandal	2									2	Ornamental	Near Endemic	
89.	<b>Orchidiaceae;</b> <i>Calanthe</i> <i>alpine</i> Hook.f.ex Lindl		Rare  Comes under Appendix II of CITES	Mandal	3									3	Ornamental	Himalayan region	
90.	<b>Orchidiaceae;</b> <i>Gastrodia</i> <i>falconeri</i> D.L. Jones & M.A. Clem.		Rare Comes under Appendix II of CITES	Mandal	2									2	Medicinal	Indian Subcontinent	
91.	<b>Orchidiaceae;</b> <i>Arachnis</i> <i>maggie Oei</i> "Yellow Ribbon"												3 Orchidarium (Haldwami)			Ornamental	
92.	<b>Orchidiaceae;</b> <i>Spathoglottis</i> <i>plicata</i>												3 Orchidarium (Haldwami)			Ornamental	
93.	<b>Orchidiaceae;</b> <i>Spathoglottis</i> <i>plicata (Red)</i>												3 Orchidarium (Haldwami)			Ornamental	

94.	<b>Orchidiaceae;</b> <i>Spathoglottis plicata</i> (Yellow)												3 Orchidarium (Haldwami)			Ornamental	
95.	<b>Orchidiaceae;</b> <i>Vanda miss Joaquim</i>												5 Orchidarium (Haldwami)			Ornamental	
96.	<b>Orchidiaceae;</b> <i>Vanda poepoe 'Diane'</i>												5 Orchidarium (Haldwami)				
97.	<b>Orchidiaceae;</b> <i>Arundina graminifolia</i>												1(Gaja) Orchidarium; 5 Orchidarium (Haldwami)		6	Ornamental	Nepal, Bhutan, India, Myanmar, Thailand, Cambodia, Vietnam, Philippines, Guangdon, Hainan,
98.	<b>Orchidaceae;</b> <i>Herminium lanceum</i>												26(Gaja) Orchidarium		26		Europe, Asia to Japan and the Malay Archipelago
99.	<b>Orchidaceae;</b> <i>Eria globulifera</i>												5(Gaja) Orchidarium		5		Eastern Himalaya, Myanmar, Thai land, Cambodia, Laos and Vietnam.
100.	<b>Orchidaceae;</b> <i>Nervilia gammieana</i>												3(Gaja) Orchidarium		3		Pakistan to Himalaya.

101.	<b>Orchidiaceae;</b> <i>Gastrochilus acutifolius</i> (Lindl.) Kuntze		Comes under Appendix II of CITES	Mandal	2						2			2	Ornamental	Indian Subcontinent
102.	<b>Orchidiaceae;</b> <i>Calanthe mannii</i> Hook.f.		Rare Comes under Appendix II of CITES	Mandal	2						2			2	Ornamental	Indian Subcontinent
103.	<b>Orchidiaceae;</b> Cattleya Hybrid			Mandal	2						2			2	Ornamental	Sikkim
104.	<b>Orchidiaceae;</b> <i>Calanthe masuca</i> (D.Don) Lindl.		Comes under Appendix II of CITES	Mandal	5						5			5	Ornamental	North East
105.	<b>Orchidiaceae;</b> <i>Dendrobium densiflorum</i> Lindl.		Comes under Appendix II of CITES	Mandal	5						5			5	Ornamental	North East
106.	<b>Orchidiaceae;</b> <i>Dendrobium thyrsiflorum</i> Rchb.f. ex Andre		Comes under Appendix II of CITES	Mandal	6						6			6	Ornamental	North East

107.	<b>Orchidiaceae;</b> <i>Cymbidium devonianum</i> Paxton		Comes under Appendix II of CITES	Mandal	4						4			4	Ornamental	North East
108.	<b>Orchidiaceae;</b> Oncidium Hybrid Yellow			Mandal	8						8			8	Ornamental	North East
109.	<b>Orchidiaceae;</b> <i>Cattleya bowringiana</i> O. Brien		Comes under Appendix II of CITES	Mandal	2						2			2	Ornamental	Exotic
110.	<b>Orchidaceae;</b> <i>Vanda tessellata</i>											5 (Public Health Garden); 5 (Orchidarium, Haldwani)		15	Medicinal	Indian subcontinent to Indochina
111.	<b>Orchidiaceae;</b> <i>Eulophia explanata</i>											2 Orchidarium (Haldwami)			Medicinal	Found in the western Himalayas, India and Nepal







112.	<b>Orchidiaceae;</b> <i>Pelatantheria insectifer</i>												2 Orchidarium (Haldwami)			Ornamenta 1	Found in Himalaya to Indo-China, and Western Ghats.
113.	<b>Orchidiaceae;</b> <i>Luisia sp.</i>												1 Orchidarium (Haldwami)			Ornamenta 1	South east asia
114.	<b>Orchidiaceae;</b> <i>Calanthe davidii</i> Franch.			Mandal	2							2			2	Ornamenta 1	Uttarakhand & North East








- 2 species are yet to be identified

















• IX. Fern species:

Fern species are being conserved mainly in Forest research ranges, Kalika, Gaja and Gopeshwar.




S. No	Family; Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Uttarakh and Govt. / Indian Biodiversity Portal)	Nursery										Experiment Site	Preservati on Plot	Gran d Total	Use	Native Region	
				Nursery Name															Total
				1		2		3		4		5							
Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Total									
1.	<b>Cytheaceae;</b> <i>Cyathea spinolosa</i> Wall. ex Hook.	 Flying spider monkey tree fern	Threatened species ( as per ENVIS centre on Floral Diversity Hosted by Botanical Survey of India/ Threatened ( State Biodiversity Board)	Mandal	10	Tangsa	15							25	4 (Kaligarh block – 17)		29	Ornamental	Pan endemic
2	<b>Blechnaceae;</b> <i>Woodwardia unigemmata</i> (Makino) Nakai			Mandal	1									1	2 (Kaligarh block – 17)		3	Soil and Moisture Conservation	Nativeto Western North America.
3	<b>Pteridaceae;</b> <i>Pteris cretica</i> Linn.	 Ribbon Fern		Mandal	10									10	10 (Kaligarh block – 17); 8 (Jurassic Park, Haldwani)		18	Medicinal and Manure	Native to Europe, Asia and Africa.
4	<b>Dennstaedtiacea e;</b> <i>Pteridium aquilinum</i> (L.) Kuhn.	 Eagle fern	Least Concern (IUCN)	Mandal	8									8	5 (Fern demonstrati on plot, Shyampur); 5 (Kaligarh block – 17)		18	Soil and Moisture Conservation	Native to India.
5	<b>Pteridaceae;</b> <i>Pteris wallichiana</i> Aghard.			Mandal	15									15			15	Soil and Moisture Conservation	Native to Himalayas.
6	<b>Dryopteridoidea e;</b> <i>Dryopteris wallichiana</i> (Spreng. L.) Hayland	 Basket fern		Mandal	6									6			6	Soil and Moisture Conservation	Native to Himalayas.








7	<b>Osmundaceae;</b> <i>Osmunda japonica</i> Thunb.	 Royal Fern	Least Concern(IUCN)	Mandal	2								2			2	Soil and Moisture Conservation	Endemic to central and southern India.
8	<b>Osmundaceae;</b> <i>Osmunda claytoniana</i> (L.) Metz. & Rouhan	 Avrudh fern		Mandal	2								2			2	Soil and Moisture Conservation	Native to Eastern Asia and eastern North America, in the Eastern United States and Eastern Canada
9	<b>Pteridaceae;</b> <i>Pteris vittata</i> Linn.	 Ladder brake fern	Least Concern (IUCN) Least concern (as per Indian Biodiversity Portal)	Mandal	2	Tangsa	2	Shyampur	05				7	5 (Kaligarh block – 17); 5 (Fern demonstration plot); 5 Gaja (Fernery); 4 (Jurassic Park, Haldwani)	(50)Pangot	78	Ornamental	Indigenous to Asia, southern Europe, tropical Africa and Australia.
10	<b>Dryopterideaceae;</b> <i>Polystichum squarrosum</i> (D.Don) Fe.			Mandal	15								15	25 (Kaligarh block – 17); 4 Gaja (Fernery); 2 (Jurassic Park, Haldwani)	(50)Pangot	96	Medicinal and Ornamental	
11	<b>Athyriaceae;</b> <i>Diplazium esculentum</i> (Retz.) Sw.	 Lingura	Least Concern (IUCN) Least concern (as per Indian biodiversity portal)	Mandal	6								6	100 (Kaligarh block – 17); 4 Gaja(Fernery)	(50)Pangot	160	Edible and Medicinal	Native to Eastern and southeastern Asia.
12	<b>Cryptogramma ceae;</b> <i>Onychium contiguum</i> Wall. ex Hope			Mandal	6								6	25 (Kaligarh block – 17) 5 Gaja (Fernery)		36	Fodder and Manure	Native range is Pakistan to China and Indo China.
13	<b>Thelypteridaceae;</b> <i>Pseudocyclosorus spp.</i>			Mandal	8								8			8	Soil and Moisture Conservation	

14	<b>Lycopodiaceae;</b> <i>Huperzia pulcherrima</i> (Wall.ex Hook. & Grev.) T. Sen & U. Sen			Mandal	1								1			1	Soil and Moisture Conservation	Native to India and China.
15	<b>Vittariaceae;</b> <i>Vittaria flexuosa</i> Fee			Mandal	1								1			1	Soil and Moisture Conservation	
16	<b>Lindsaeaceae;</b> <i>Lindsaea spp.</i>			Mandal	8								8			8	Soil and Moisture Conservation	
17	<b>Aspleniaceae;</b> <i>Asplenium dalhousiae</i> Hook.	 Vishkanya												25 (Kaligarh block – 17); 10 Gaja (Fernery)	(25) Pangot	60	Medicinal	Native to northern Mexico and disjunction to the Himalaya
18	<b>Adiantaceae;</b> <i>Adiantum venustum</i> D.Don	 Himalayan Maidenhair Fern		Shyampur	05								05	10 (Kaligarh block – 17); 15 Gaja (Fernery); 5 (Jurassic Park, Haldwani); 5 (Public Health Garden)	(25) Pangot	65	Medicinal	Native to China and the Himalayas
19	<b>Hemionitidaceae;</b> <i>Anogramma leptophylla</i> (Linn.) Link.	 Annual fern												10 (Kaligarh block – 17)		10	Medicinal	Native to India, South America, Europe, Russia, Iran and Mediterranean region
20	<b>Sinopteridaceae;</b> <i>Cheliantus dubia</i> Hope	 Rock fern												20 (Kaligarh block – 17); 2Gaja(Fernery)		22	Ornamental	Native to India (East Himalayas), Nepal, Sri Lanka, China and Taiwan

21	<b>Thelypteridaceae;</b> <i>Christella arida</i> (D.Don) Holtt.														5 (Kaligarh block – 17)		5	Ornamental	Native to India (N nd W Himalayas), Nepal, Sri Lanka, China and Taiwan
22	<b>Hemionitidaceae;</b> <i>Coniogramme indica</i> Fee														25 (Kaligarh block – 17)		25	Ornamental	Native to India
23	<b>Gleicheniaceae;</b> <i>Dicranopteris linearis</i> Holttum														20 (Kaligarh block – 17)		20	Medicinal	Native to Hawaii
24	<b>Dryopterideaceae;</b> <i>Dryopteris edwardsii</i> Fraser – Jenk.	 Wood fern													25 (Kaligarh block – 17)		25	Ornamental	Native range is Pakistan to China (Yunnan), Taiwan.
25	<b>Dryopterideaceae;</b> <i>Dryopteris gamblei</i> (Hope)C.Chr.	 Wood fern													100 (Kaligarh block – 17)		100	Ornamental	
26	<b>Dryopterideaceae;</b> <i>Dryopteris nigropaleacea</i> (Fraser – Jenk.)Fraser – Jenk.	 Wood fern													100 (Kaligarh block – 17); 2Gaja(Fernery)	(50)Pangot	152	Ornamental	Endemic to parts of Afghanistan, Pakistan, Western Nepal, and Himachal Pradesh
27	<b>Dryopterideaceae;</b> <i>Dryopteris reductopinnata</i> Basu & Panigarhi	 Basket fern													2 (Kaligarh block – 17)		2	Ornamental	

28	<b>Athyriaceae;</b> <i>Gymnocarpium fedtschenkoanum</i> Pojark.	 Western oak fern													100 (Kaligarh block – 17)		100	Ornamental	Native range is Afghanistan to Central Asia and W. Nepal
29	<b>Polypodiaceae;</b> <i>Lepisorus excavatus</i> (Willd.) Ching.														10 (Kaligarh block – 17)		10	Ornamental	South Africa to central Africa
30	<b>Polypodiaceae;</b> <i>Microsorium membranaceum</i> (D. Don ) Ching.	 Shield fern													8 (Kaligarh block – 17); 2Gaja(Fernery)	(10)Pangot	20	Medicinal	Native range is Tropical & Subtropical Asia
31	<b>Thelypteridaceae;</b> <i>Phegopteris connectilis</i> (Michx.) Watt.	 Long beech fern													100 (Kaligarh block – 17)		100	Ornamental	Native to Europe, Asia and North America.
32	<b>Dryopterideaceae;</b> <i>Polystichum obliquum</i> (D.Don) Moore														25 (Kaligarh block – 17); 3Gaja(Fernery)	(10)Pangot	38	Ornamental	Native to western North America
33	<b>Dryopterideaceae;</b> <i>Polystichum yunnanense</i> Christ														100 (Kaligarh block – 17)		100	Ornamental	Native range is Yemen, Afghanistan to China.
34	<b>Polypodiaceae;</b> <i>Pyrrosia costata</i> (Presl.ex Bedd.) Tagawa & Iwats														10 (Kaligarh block – 17)		10	Ornamental	
35	<b>Polypodiaceae;</b> <i>Phymatopteris ebenipes</i> (Hook.)Pic. Ser														10 (Kaligarh block – 17)		10	Ornamental	Native to India, Bhutan, China and Tibet.

36	<b>Pteridaceae;</b> <i>Pteris aspericaulis</i> Wall. ex Ag.	 Three coloured brake fern													100 (Kaligarh block – 17); 2Gaja(Fern ery)	(50)Pangot	152	Medicinal and Manure	Native to the Himalayas.
37	<b>Tectariaceae;</b> <i>Tectaria coadunata</i> (J. Smith) C. Chr.														10 (Kaligarh block – 17); 2Gaja(Fern ery) 2Gaja(Fern ery)		14	Medicinal	Native to Africa
38	<b>Adiantaceae;</b> <i>Adiantum philippense</i> Linn.	 Walking maidenhair fern													25 (Kaligarh block – 17); 5 (Fern demonstrati on plot)		30	Medicinal	Native to Asia and Africa
39	<b>Adiantaceae;</b> <i>Adiantum edgeworthii</i> Hook	 Mayurshikha													5 (Kaligarh block – 17); 15Gaja(Fer nery)	(50)Pangot	70	Medicinal	Native to Himalaya and China.
40	<b>Dryopterideaceae;</b> <i>Dryopteris lepidopoda</i> Hayata	 Sunset fern													5 (Kaligarh block – 17)		5	Ornamental	Native to India, Taiwan, and China.
41	<b>Polypodiaceae;</b> <i>Arthromeris himalayensis</i> Ching ex Mehra & Bir														2 (Kaligarh block – 17)		2	Medicinal	
42	<b>Polypodiaceae;</b> <i>Polypodiastrium argutum</i> (Wall. ex HooK.)ching														8 (Kaligarh block – 17)		8	Ornamental	Native range is Himalaya to S. China and Indo China

43	<b>Aspleniaceae;</b> <i>Asplenium nidus</i> Linn.	 Bird Nest fern												2(Kaligarh block – 17)		1	Ornamental	Native to tropical areas from Polynesia and Hawaii west to Southeast Asia, Australia, and Madagascar
44	<b>Polypodiaceae;</b> <i>Microsorium punctatum</i> (L.) Copel.	 Elkhorn fern/ Fish tail fern												10 (Kaligarh block – 17)		10	Medicinal	Native to Asia, Africa, Australia
45	<b>Pteridaceae;</b> <i>Pteris ensiformis</i> Burm.f.	 Silver lace fern												12 (Kaligarh block – 17)		12	Ornamental	Asia and the Pacific.
46	<b>Nephrolepidaceae;</b> <i>Nephrolepis sp.</i>	 Curly fern												10 (Kaligarh block – 17); 5 (Jurassic Park, Haldwani)		15	Ornamental	
47	<b>Polypodiaceae;</b> <i>Platycerium sp.</i>	 Staghorn fern												1 (Kaligarh block – 17)		1	Ornamental	
48	<b>Gleicheniaceae;</b> <i>Gleichenia gigantean</i> Wall. ex Hook.	 Gleichenia gigantean												5 (Kaligarh block – 17)		5	Ornamental	North East, India
49	<b>Asparagaceae;</b> <i>Asparagus setaceus</i> (Kunth) Jessop	 Common asparagus fern												4 (Fern demonstration plot, Shyampur); 5 (Kaligarh block – 17)		9	Ornamental	Native to Southern Africa & Asia
50	<b>Ophioglossaceae;</b> <i>Helmeinthostachys zeylanica</i> (L.)Hook	 Kamraj		Shyampur	20								20	5 (Fern demonstration plot, Shyampur) 8 (Public Health Garden)		33	Ornamental	Native to Southeastern Asia and Australia

51	<b>Dryopterideaceae ;</b> <i>Dryopteris filix mas</i> (L.) Schott	 Male fern		Shyampur	05									05	5 (Fern demonstration plot, Shyampur); 2 Gaja (Fernery); 2 Gaja (Fernery)	(25) Pangot	39	Ornamental	Native to Europe, Asia, and North America
52	<b>Dryopteridaceae;</b> <i>Polystichum longipaleatum</i> Christ														4 Gaja (Fernery)	(50)Pangot	54	Ornamental	Native to Uttarakhnad and Eastern India
53	<b>Pteridaceae;</b> <i>Coniogramme intermedia</i> Shishi														5 Gaja (Fernery)	(50)Pangot	55	Medicinal and edible	Native to India
54	<b>Pteridaceae;</b> <i>Pteris excelsa</i> Gaudich.														3 Gaja (Fernery)	(50)Pangot	53	Ornamental	Native to Kashmir , East India and South India
55	<b>Adiantaceae;</b> <i>Adiantum capillus var. veneris</i> Linn.		Least concern (IUCN)												15 Gaja (Fernery)	(50)Pangot	65	Medicinal	Native to United States
56	<b>Adiantaceae;</b> <i>Adiantum incisum</i> Forssk.	 Hansraj													15Gaja (Fernery) 10 (Public Health Garden)	(50)Pangot	75	Medicinal	Native to India, South America and Mexico
57	<b>Polypodiaceae;</b> <i>Phymatopteris quasidivericata</i> (Hayata)Pic. ser														2Gaja (Fernery)	(12)Pangot	14	Ornamental	Native to India, China and Tibet
58	<b>Athyriaceae;</b> <i>Athyrium tenuiformis</i>														5Gaja (Fernery)	(50)Pangot	55	Ornamental	Native to India, China, Nepal, Myanmar and Africa









59	<b>Equisetaceae;</b> <i>Equisetum sp.</i>	 Horsetail												6(Jurassic Park, Haldwani)		6	Medicinal	
60	<b>Polypodiaceae;</b> <i>Pyrrosia sp.</i>	 Pyrrosia												2 (Jurassic Park, Haldwani)		2	Ornamental	
61	<b>Nephrolepidaceae;</b> <i>Nephrolepis biserrata</i> (Sw.) Schott	 Giant sword fern												2 (Kaligarh block – 17)		2	Medicinal	
62	<b>Nephrolepidaceae;</b> <i>Nephrolepis tuberosa</i>	 fishbone fern												2 (Kaligarh block – 17)		2	Ornamental	Native to Northern Australia and Asia.
63	<b>Athyriaceae;</b> <i>Athyrium pectinatum</i> (Wall.ex Hope) Pres	 Lady fern												100 (Kaligarh block – 17)		100	Medicinal	Native to N. Indian Subcontinent to SE. Tibet
64	<b>Nephrolepidaceae;</b> <i>Nephrolepis exaltata</i> (L.) Scott	 Boston fern		Shyampur	05									05	2 (Kaligarh block – 17); 5 (Fern demonstration plot, Shyampur)	12	Ornamental	Native to tropical regions throughout the world.
65	<b>Nephrolepidaceae;</b> <i>Nephrolepis exaltata 'Aurea'</i> Cultivar	 Golden fern													2 (Kaligarh block – 17)	2	Ornamental	
66	<b>Aspleniaceae;</b> <i>Asplenium victori</i>	 Victorian bird nest fern													1 (Kaligarh block – 17)	1	Ornamental	Native to the temperate regions of Eastern Asia






67	<b>Davalliaceae;</b> <i>Davallia trichomoides</i> Blume	 Black rabbit foot fern													2 (Kaligarh block – 17)		2	Ornamental	Native to Eastern Asia, Japan.
68	<b>Selaginellaceae;</b> <i>Selaginella kraussiana</i> (Kunze) a. Braun	 Frosty fern													10 (Kaligarh block – 17)		10	Ornamental	Native to Canary Islands, and parts of south and east Africa.
69	<b>Dryopteridaceae</b> ; <i>Polytichum</i> sp.														3 (Kaligarh block – 17)		3	Ornamental	
70	Unidentified														4 (Kaligarh block – 17)		4		
71	Unidentified														10 (Kaligarh block – 17)		10		
72	Unidentified														10 (Kaligarh block – 17)		10		
73	Unidentified														5 (Kaligarh block – 17)		5		
74	Unidentified														6 (Kaligarh block – 17)		6		
75	<b>Oleandraceae;</b> <i>Oleandra wallichii</i> (Hook.) Pres														4 (Kaligarh block – 17)		4	Medicinal	–
76	<b>Polypodiaceae;</b> <i>Phlebodium aureum</i> (L.) J. Sm.														2 (Kaligarh block – 17)		2	Ornamental	–

77	<b>Polypodiaceae;</b> <i>Polypodium vulgare</i> L.													10 (Kaligarh block – 17)		10	Ornamental	–
78	<b>Athyriaceae;</b> <i>Deparia petersenii</i> (Kunze)M. Kato													5 (Kaligarh block – 17)		5	Ornamental	–
79	<b>Polypodiaceae ;</b> <i>Drynaria mollis</i> Bedd.			Mandal	2									2		2		Native to India , Nepal, Bhutan, China and Tibet
80	<b>Dryopteridaceae;</b> <i>Cyrtomium caryotideum</i> (Wall.) Presl.			Mandal	1									1		1		Native to India , Nepal, Pakistan, Bhutan, China and Tibet
81	<b>Aspleniaceae ;</b> <i>Asplenium tenuicaule</i> Hayata			Tangsa	5									5		5		Native to India , Nepal, Bhutan, China and Tibet
82	<b>Aspleniaceae ;</b> <i>Asplenium ensiforme</i> Wall. ex Hook. & Grev.			Mandal	3									3		3	Dye	Native to India , Africa, China and Japan
83	<b>Nephrolepidaceae;</b> <i>Nephrolepis auriculata</i> (L.) Trimen			Mandal	2									2		2	Medicinal	Native to India , Nepal, Bhutan, China and Myanmar
84	<b>Marsileaceae;</b> <i>Marsilea quadrifolia</i> L.			Mandal	10									10		10	Medicinal	Native to India , Nepal and China
85	<b>Davalliaceae;</b> <i>Davallia spp.</i>													10 (Kaligarh block – 17)		10	Ornamental	

86	<b>Athyriaceae;</b> <i>Athyrium filix femina</i> (L.) Roth	 Lady Fern														10 (Kaligarh block – 17)		10	Ornamental	Native to the continental US and Alaska
87	<b>Pteridaceae;</b> <i>Pteris longifolia</i> L.	 Longleaf brake														10 (Kaligarh block – 17)		10	Ornamental	Native ro Central America
88	<b>Polypodiaceae;</b> <i>Polypodium virginianum</i> L.	 Rock rcap fern														5 (Kaligarh block – 17)		5	Ornamental	Native to the Eastern United States and Canada.
89	Unidentified															5 (Kaligarh block – 17)		5		
90	<b>Dryopteridacea e;</b> <i>Dryopteris cycadina</i> (Franch. & Sav.) C. Chr.	 Wood fern														5 (Kaligarh block – 17)		5	Ornamental	Native to northern India, China, Taiwan and Japan
91	<b>Aspleniaceae ;</b> <i>Asplenium</i> spp.															1 (Kaligarh block – 17)		1	Ornamental	
92	Unidentified															5 (Kaligarh block – 17)		5		
93	<b>Dryopteridacea e;</b> <i>Polystichum aculeatum</i> (L.) Roth	 Hard shield fern														5 (Kaligarh block – 17)		5	Ornamental	Native to Europe
94	<b>Marsileaceae;</b> <i>Marsilea minuta</i>	 Dwarf waterclover														15 (Kaligarh block – 17)		15	Medicinal	Native to Southeast Asia



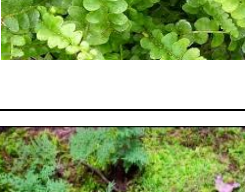
95	<b>Dryopteridaceae;</b> <i>Polystichum nepalense</i> (Spreng.) C.Chr.														2 Gaja (Fernery)		2	Ornamental	Native to Central Himalayas
96	<b>Dryopteridaceae;</b> <i>Polystichum stimulans</i> (Kunse ex Mett.)														2 Gaja (Fernery)		2	Ornamental	Found from Himalayas to China
97	<b>Blechnaceae;</b> <i>Woodwardia unigemmata</i> Sm.														2 (Kaligarh block – 17)		2	Medicinal	Native to Eastern Asia from the Himalayas to China
98	<b>Ophioglossaceae ;</b> <i>Ophioglossum reticulatum</i>														15 (Kaligarh block – 17)			Medicinal/ Edible.	Native range is Tropics & Subtropics.
99	<b>Polypodiaceae ;</b> <i>Lepisorus tenuipis</i>														15 (Kaligarh block – 17)			Ornamental	
100	<b>Equisetaceae;</b> <i>Equisetum morriensis</i>														20 (Kaligarh block – 17)			Medicinal	Native throughout the arctic and temperate regions of the Northern Hemisphere.
101	<b>Equisetaceae;</b> <i>Equisetum diffusum</i>														10 (Kaligarh block – 17)			Medicinal	Native species to the Himalayan Mountains.
102	<b>Pteridaceae;</b> <i>Adiantum capillus - veneris</i>														5 (Kaligarh block – 17)			Medicinal	Native to the southern half of the United States from California to the Atlantic coast, through Mexico and Central America, to South America

103	<b>Pteridaceae;</b> <i>Onychium japonicum</i>														15 (Kaligarh block – 17)			Ornamental	Native to asia
104	<b>Selaginellaceae;</b> <i>Selaginella invocular</i>														2 (Kaligarh block – 17)			Ornamental	
105	<b>Polypodiopsida;</b> <i>Botrychium ternatum</i>														1(Kaligarh block – 17)			Medicinal	Native range is Himalaya to S. Sakhalin and Temp. E. Asia
106	<b>Selaginellaceae;</b> <i>Selaginella concolus</i>														25 (Kaligarh block – 17)			Ornamental	
107	<b>Dryopteridaceae;</b> <i>Dryopteris spp.</i>														20(Kaligarh block – 17)			Ornamental	
108	<b>Aspleniaceae;</b> <i>Asplenium lanceolata</i>														1(Kaligarh block – 17)			Ornamental	
109	<b>Polypodiaceae;</b> <i>Drynaria propanoperis</i>														3 (Kaligarh block – 17)			Medicinal	Native to tropical Africa, South Asia

110	<b>Lindsaeaceae;</b> <i>Spinomeris chinensis</i>														2 (Kaligarh block – 17)			Ornamental	Native to Madagascar, China, the Himalyas, India, Sri Lanka
111	<b>Lygodiaceae;</b> <i>Lygopodium japonicum</i>														1 (Kaligarh block – 17)			Ornamental	Native to southern and eastern China, Japan, Korea, the Indian sub-continent
112	<b>Polypodiaceae;</b> <i>Hypolepis punctata</i>														5 (Kaligarh block – 17)			Ornamental	Native to China and East Asia.
113	<b>Thelypteridaceae;</b> <i>Pronephrium penguin</i>														1 (Kaligarh block – 17)			Ornamental	
114	<b>Pteridaceae;</b> <i>Cheilanthes albomarginata</i>														15 (Kaligarh block – 17)			Ornamental	Native range is Indian Subcontinent to S. China
115	<b>Araceae;</b> <i>Anthurium rugulosum</i>														50 (Kaligarh block – 17)			Fodder	
116	<b>Selaginellaceae;</b> <i>Selaginella cultivar</i>														2 (Kaligarh block – 17)			Ornamental	








117	<b>Salviniaceae;</b> <i>Salvinia auriculata</i>														8 (Kaligarh block – 17)			Ornamental	Native to South and Central America
118	<b>Pteridaceae;</b> <i>Coniogramme spp</i>														1 (Kaligarh block – 17)			Ornamental	
119	<b>Osmundaceae;</b> <i>Osmunda regalis</i>														1 (Kaligarh block – 17)			Medicinal	Native range is Macaronesia , Europe to Medit. and Iran.
120	<b>Osmundaceae;</b> <i>Osmunda Claytoniana</i>														2 (Kaligarh block – 17)			Medicinal	Native to Eastern Asia, Eastern United States, and Eastern Canada.
121	<b>Pteridaceae;</b> <i>Adiantum incisum</i>														20 (Kaligarh block – 17)			Medicinal	It is accepted, and its native range is Africa, Arabian Peninsula Indian Subcontinent to China
122	<b>Thelypteridaceae;</b> <i>Glaphyopteridopsis erubescens</i>														1 (Kaligarh block – 17)			Medicinal	Native range is Himalaya to Temp. E. Asia and Philippines.
123	<b>Athyriaceae;</b> <i>Athyrium schimperii</i>														1 (Kaligarh block – 17)			Fodder	Native range is Tropical & S. Africa, Madagascar










124	<b>Dryopteridaceae</b> <i>Cystopteris fragile</i>														1 (Kaligarh block – 17)		1	Ornamental	
125	<b>Polypodiaceae;</b> <i>Polystichum longipaleatum</i>														2 (Kaligarh block – 17); 4 (Fernery, Gaja)	50 (Pangot)	56	Ornamental	Native range is Himalaya to S. China
126	<b>Athyriaceae;</b> <i>Athyrium tenuiformis</i>														2 (Kaligarh block – 17)		2	Ornamental	
127	<b>Polypodiaceae;</b> <i>Lepisorus mehrae</i>														8 (Kaligarh block – 17)		8	Ornamental	
128	<b>Salviniaceae</b> <i>Azolla pinnata</i>														15 (Kaligarh block – 17)			Ornamental	Africa, Asia (Brunei Darussalam, China, India, Japan, Korea, and the Philippines) and parts of Australia.
129	<b>Nephrolepidaceae;</b> <i>Nephrolepis duffii</i>														5 (Kaligarh block – 17)			Ornamental	Native to Australia
130	<b>Selaginellaceae</b> <i>Selaginella wallichii</i>														8 (Kaligarh block – 17)			Ornamental	Native to China and several countries in Southeast Asia.

131	<b>Selaginellaceae;</b> <i>Sellaginella vogelii</i>														5 (Kaligarh block – 17)			Ornamental	Native to tropical Africa
132	<b>Selaginellaceae;</b> <i>Sellaginella erythropus</i>														5 (Kaligarh block – 17)			Ornamental	Native range is Costa Rica, S. Tropical America.
133	<b>Selaginellaceae;</b> <i>Sellaginella braunii</i>														10 (Kaligarh block – 17)			Ornamental	Native to China.
134	<b>Selaginellaceae;</b> <i>Selaginella wildenovii</i>														5 (Kaligarh block – 17)			Ornamental	Native from Asia: Burma, Malaysia, Indonesia e Philippines
135	<b>Marattiaceae</b> <i>Angiopteris helferiana</i>														5 (Kaligarh block – 17)			Ornamental	Native range is Indian Subcontinent to Temp. E. Asia and W. Malesia.
136	<b>Dryopteridaceae;</b> <i>Bolbitis heterocilta</i>														2 (Kaligarh block – 17)			Ornamental	
137	<b>Tectariaceae;</b> <i>Tectaria wightii</i>														1 (Kaligarh block – 17)			Ornamental	Native range is Tropical & Subtropical

138	<b>Tectariaceae;</b> <i>Tectaria incisa</i>														2 (Kaligarh block – 17)			Ornamental	Native from Columbia.
139	<b>Thelypteridaceae;</b> <i>Pronephrium nudatum.</i>														5 (Kaligarh block – 17)			Ornamental	Native range is Indian Subcontinent to China (Yunnan, Guizhou) and Indo-China.
140	<b>Pteridaceae;</b> <i>Pteris subquinata</i>														2 (Kaligarh block – 17)			Ornamental	
141	<b>Tectariaceae;</b> <i>Tectaria polymorpha</i>														2 (Kaligarh block – 17)			Ornamental	Native range is Tropical & Subtropical
142	<b>Pteridaceae;</b> <i>Pteris biaurita</i>														2 (Kaligarh block – 17)			Ornamental	Africa, the Americas, and Asia.
143	<b>Lindsaeaceae;</b> <i>Odenotosaia chinensis</i>														2 (Kaligarh block – 17)			Ornamental	
144	<b>Davalliaceae;</b> <i>Araiostegia beddomei</i>														2 (Kaligarh block – 17)			Ornamental	

145	<b>Thelypteridaceae;</b> <i>Macrothelypteris ornata</i>														2 (Kaligarh block – 17)			Ornamental	Native to tropical and subtropical Africa and Asia
146	<b>Polypodiaceae;</b> <i>Loxogramme involuta</i>														6 (Kaligarh block – 17)			ornamental	Native range is Himalaya to Japan and Indo-China, Central & S. Malesia.
147	<b>Selaginellaceae;</b> <i>Selaginella bryopteris</i>														20 (Kaligarh block – 17)			Medicinal	Native to India.
148	<b>Pteridaceae;</b> <i>Hemionitis arifolia</i>	 Heart fern													1 (Kaligarh block – 17)			Ornamental	Srilanka , India, Indochina, Malaysia.
149	<b>Polypodiaceae;</b> <i>Microsorium musifolium</i>	 Crocodyllus fern													1 (Kaligarh block – 17)			Ornamental	S. Myanmar to New Guinea.
150	<b>Aspleniaceae;</b> <i>Asplenium spp.</i>														5 (Kaligarh block – 17)				Native to northen Mexico and disjunction to the Himalaya
151	<b>Psinopteridaceae</b> ; <i>Cheilanthus dubia (C.Hope)</i>														2Gaja(Fern ery)	2		Medicinal	Native to Himalayas

152	<b>Polypodiaceae;</b> <i>Pyrrosia flocculosa</i> Don . (Ching)														2 (Kaligarh block – 17)			Ornamenta I	
153	<b>Polypodiaceae;</b> <i>Goniophlebium argutum</i> Wall.ex Hook														2 (Kaligarh block – 17)			Ornamental	Himalaya to S. china
154	<b>Selaginaceae;</b> <i>Sellaginella oxyloba</i>														5 (Kaligarh block – 17)			Ornamental	
155	<b>Polypodiaceae;</b> <i>Lepisorus scolopendrium</i>														5 (Kaligarh block – 17)			Ornamental	Himalaya to S. china
156	<b>Pyrrosia</b> <i>erythocarpa</i> (Mett. Ex Kze ) Ching														2 (Kaligarh block – 17)			Ornamental	
157	<b>Selaginaceae;</b> <i>Selaginella hastata</i>														5 (Kaligarh block – 17)			Ornamental	
158	<b>Polypodiaceae;</b> <i>Lepisorus thunbergianus</i> Kaulf	 Weeping Fern													2 (Kaligarh block – 17)			Ornamental	China , Bhutan , N. E India
159	<b>Pteridaceae;</b> <i>Pteris terminalis</i>														2 (Kaligarh block – 17)			Ornamental	




160	<b>Polypodiaceae;</b> <i>Loxogramme porcata</i>														2 (Kaligarh block – 17)			Ornamental	
161	<b>Polypodiaceae;</b> <i>Arthromeris lehmanii</i> Mett. <i>Ching</i>														2 (Kaligarh block – 17)			Ornamental	Himalaya to Taiwan
162	<b>Polypodiaceae;</b> <i>Pyrrosia mollis</i>														6 (Kaligarh block – 17)			Ornamental	Native rangmeroon to Uge is Caanda and S. Tropical Africa.
163	<b>Marattiaceae;</b> <i>Angiopteris evecta</i> Hoffm.														6 (Kaligarh block – 17)			medicinal	New Guinea, Australia, Melanesia, Micronesia.
164	<b>Cyatheaceae;</b> <i>Alsophila khasyana</i>														6 (Kaligarh block – 17)			Ornamental.	India to Myanmar
165	<b>Dryopteridaceae;</b> <i>Polystichum spp.</i>														6 (Kaligarh block – 17)			Ornamrntal	
166	<b>Cyatheaceae;</b> <i>Cyathea gigantea</i>														6 (Kaligarh block – 17)			Ornamental	Northeastern to Southern India.

167	<b>Pteridaceae;</b> <i>Adiantum assamicum</i>														6 (Kaligarh block – 17)			Ornamental	
168	<b>Pteridaceae;</b> <i>Pteris spp.</i>														6 (Kaligarh block – 17)			Ornamental	Native to Europe, Asia and Africa.
169	<b>Dryopteridace ae;</b> <i>Dryopteris caroli-hopei</i>														5 Gaja(Ferner y)		5		Found in Bhutan, China, Malay Penninsula, Myanmar, Nepal, Srilanka, Taiwan and Tibet.
170	<b>Dryopteridace ae;</b> <i>Dryopteris chryosocoma</i>														5 Gaja(Ferner y)		5	Medicinal	Found in Bhutan, China, Myanmar, Nepal , Pakistan, Philippines, Taiwan and Tibet.
171	<b>Athyriaceae;</b> <i>Diplazium muricatum</i>														5 Gaja(Ferner y)		5		Sri Lanka, India, Burma, in Java.
172	<b>Equisetaceae ;</b> <i>Equisetum ramosissimum</i>														5 Gaja(Ferner y)		5	Medicinal	Afghanistan, Bangladesh, Bhutan, India, Indonesia, Japan, Kashmir, Korea, Laos, Malaysia, Mongolia, Myanmar, Nepal, New Guinea, Pakistan, Philippines,



















184	<b>Pteridaceae;</b> <i>Cheliantes rufa</i> Don.																	1 (Kaligarh block – 17 )				-----	
185	<b>Aspleniaceae;</b> <i>Asplenium capillipes</i> Makino																		1 (Kaligarh block – 17 )				Himalaya to Temp. E. Asia
186	<b>Dryopteridaceae;</b> <i>Dryopteris sparsa</i> (D.Don) Kuntz.																		1 (Kaligarh block – 17 )				Himalaya to China
187	<b>Lycopodiaceae;</b> <i>Lycopodiealla cernua</i> (L.) Pichi-Serm.																		1 (Kaligarh block – 17 )				-----
188	<b>Selaginellaceae;</b> <i>Sellaginella indica</i> Tryon																		1 (Kaligarh block – 17 )				
189	<b>Polypodiaceae;</b> <i>Lepisorus clathratus</i> Ching.																		1 (Kaligarh block – 17 )				-----
190	<b>Sellaginellaceae a;</b> <i>Selaginella vaginata</i>																		1 (Kaligarh block – 17 )				-----
191	<b>Sellaginellaceae a;</b> <i>Selaginella indica</i>																		1 (Kaligarh block – 17 )				-----



- 20 species are yet to be identified

**X. Alpine Flower/ Brahm Kamal Species:**

Alpine Flower/ Brahm Kamal Species are being conserved at Mana (Research Range, Gopeshwar).






S. No	Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Uttarakhand Govt. / Indian Biodiversity Portal)	Nursery								Experiment Site	Preservation Plot	Grand Total	Use	Native Region	
				Nursery Name													Total
				1		2		3		4							
				Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant						
1.	<b>Asteraceae ;</b> <i>Saussurea obvallata</i> (DC.) Edgew.	 Brahmakamal	Endangered Saussurea species in Indian Himalayan,Region (as per Research paper-page no. 264)									330 (Mana van panchayat); 10(RET demonstration site, Harkot Munsyari)	–	340	Medicinal	Himalayas to China.	
2.	<b>Asteraceae ;</b> <i>Saussurea simpsoniana</i> (Field. &Gard.) Lipsch.	 Phen Kamal	Endangered Saussurea species in Indian Himalayan,Region (as per Research paper-page no. 264)									58 (Mana van panchayat)	–	58	Medicinal	Indian Himalayan region	
3.	<b>Asteraceae ;</b> <i>Saussurea gossypiphora</i> D. Don	 Kasturi Kamal	Critically endangered Saussurea species in Indian Himalayan,Region (as per Research paper-page no. 264)									12 (Mana van panchayat)	–	12	Medicinal	Indian Himalayan region	
4	<b>Asteraceae ;</b> <i>Cremanthodium arnicoides</i> (DC.ex Royle) Good	 Jarhil										90 (Mana van panchayat)	–	90	Ornamental	Indian Himalayan region	
5	<b>Boraginaceae ;</b> <i>Arnebia benthami</i> (Wall. ex G. Don) Johnston	 Baal chhadi	Endangered (International Journal of Applied, Biology, and Pharmaceutical, Technology). (as per Research paper-page no. 264)	Devvan	24	Patalhod	15					18 (Mana van panchayat)	–	57	Medicinal	Indian Himalayan region	

6	<b>Ranunculaceae;</b> <i>Anemone tetrasepala</i> Royle	 Anemone									90 (Mana van panchayat)	–	90	Orname ntal	Indian Himalayan region	
7	<b>Papavaraceae;</b> <i>Meconopsis aculeata</i> Royle	 Himalyan Blue Poppy	Critically Endangered International Journal of Applied, Biology, and Pharmaceutical, Technology.	Pataltho d	5						5	10 (Mana van panchayat)	–	15	Medicina l	Near Endemic Indian Himalayan region
8	<b>Onagraceae;</b> <i>Epilobium latifolium</i> Linn.	 River beauty										4 (Mana van panchayat)	–	4	Orname ntal	Indian Himalayan region
9	<b>Fabaceae;</b> <i>Thermopsis barbata</i> Benth.	 Black Pea										1 (Mana van panchayat)	–	1	Orname ntal	Himalaya to W.&S. Central China
10	<b>Dipsacaceae;</b> <i>Morina longifolia</i> Wall. ex de Candolle	 Biskanera		Devvan	09						09	18 (Mana van panchayat)	–	27	Medicina l	Indian Himalayan region
11	<b>Asteraceae ;</b> <i>Saussurea graminifolia</i> Wall. ex D. C.	 Neelkamal										250 (Mana van panchayat)		250	Fodder	Indian Himalayan region
12	<b>Ranunculaceae;</b> <i>Trollius acaulis</i> Lindl.											8 (Mana van panchayat)		8	Orname ntal	Indian Himalayan region

13	<b>Ranunculaceae;</b> <i>Aquilegia nivalis</i> (Baker) Falc. ex B. D. Jacks.		Rare (IUCN red list 1997)									5 (Mana van panchayat)		5	Orname ntal	Indian Himalayan region
14	<b>Ranunculaceae:</b> <i>Anemone obtusifolia</i>	 Kukkdu					Devvan	02				02		02	Medicina 1	Alpine Himalayas

**XI. Wild Flower**

**Wild Flowers are being conserved at Research Range Gaja, Jeolikote.**



S. No	Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/ Uttarakhand Govt. / Indian Biodiversity Portal)	Nursery								Experiment Site	Preservation Plot	Grand Total	Use	Native Region	
				Nursery Name													Total
				1		2		3		4							
				Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant						
1.	<b>Polygonaceae;</b> <i>Persicaria orientalis</i>	 Machoti										4 (Gaja) Wild flowers		4	Medicinal	China, Japan and southward to Australia	
2.	<b>Hypericaceae;</b> <i>Hypericum oblongifolium</i>	 Basanti/pyoli										2 (Gaja) Wild flowers		2	Medicinal	Native to western Himalayas	
3.	<b>Asteraceae;</b> <i>Anaphalis margaritacea</i>	 Cottonweed										2 (Gaja) Wild flowers		2	Medicinal	Native to Himalayas	
4.	<b>Asteraceae;</b> <i>Erigeron bellidiodes</i>											2(Gaja) Wild flowers		2	Ornamental	Native to Indian subcontinent	
5.	<b>Polygonaceae;</b> <i>Persicaria capitata</i>											3 (Gaja) Wild flowers		3	Medicinal	Native to Indian subcontinent	





6.	<b>Violaceae;</b> <i>Voila verecunda</i>											2(Gaja)		2	Edible and medicinal	Native to Himalayas
7.	<b>Amaryllidaceae;</b> <i>Zephyranthes carinata</i>	 Fairy Lily										10 (Gaja) Wild flowers		10	Ornamental	Native to Mexico
8.	<b>Araceae;</b> <i>Arisaema propinquum</i>											2(Gaja) Wild flowers		2	Medicinal	Native to the Himalayas
9.	<b>Primulaceae;</b> <i>Primula denticulata</i>			Devva n	250							250	1 (Gaja) Wild flowers	251	Ornamental	Native to India
10.	<b>Convolvulaceae;</b> <i>Ipomea purpurea</i>												1 (Gaja) Wild flowers	1	Ornamental	Native to India
11.	<b>Solanaceae;</b> <i>Burgmansia suaveolans</i>	 Dhatura	Extinct in the wild										2 (Gaja) Wild flowers 10 (Public Health Garden)	12	Medicinal	Native to Southeastern Brazil
12.	<b>Rubiaceae;</b> <i>Spermadictyon suaveolens</i>	 Van champa											2(Gaja) Wild flowers 20 Bhujiyagh at (Aromatic plants)	22	Ornamental	Native to Western Ghats and Himalayas.

13.	<b>Asteraceae;</b> <i>Cosmos sulphurous</i>	 Cosmos											4(Gaja) Wild flowers	4	Ornamental	Native to Mexico and northern South America
14.	<b>Asteraceae ;</b> <i>Solidago canadensis</i>	 Common goldenrod											4(Gaja) Wild flowers	4	Medicinal	Native to northeastern and north central North America
15.	<b>Buddlejaceae;</b> <i>Buddleja davidii</i>	 Butterfly Bush	Patalth od	100									2(Gaja) Wild flowers	102	Butterfly host	Karnataka: Mysore Tamil Nadu: Dindigul
16.	<b>Malvaceae ;</b> <i>Malvaviscus arboreus</i>												2(Gaja) Wild flowers	2	Ornamental	Native to Northeast India
17.	<b>Acanthaceae;</b> <i>Eranthemum pulchellum</i>												2(Gaja) Wild flowers	2	Ornamental	Native ranges are India, Himalayas and Western China.
18.	<b>Asteraceae;</b> <i>Dahlia sorensonii</i>												2(Gaja) Wild flowers	2	Edible and medicinal	Native to Mexico and Central America
19.	<b>Oleaceae;</b> <i>Jasminum mesnyi</i>												2 (Gaja) Wild flowers/ 2 (Lata pergola Haldwani)	4	Ornamental	Native to Vietnam and southern China
20.	<b>Linaceae;</b> <i>Reinwardtia indica</i>		Kalika	500									502 (Gaja) Wild flowers	502	Ornamental	Native to India








21.	<b>Thymelaeaceae;</b> <i>Wikstroemia canescence</i>											2 (Gaja) Wild flowers		2	Ornamental	Native range is Indian Himalayas
22.	<b>Orbanchaceae;</b> <i>Pedicularis bifida</i>			Patalh od	50							50		50	Medicinal	India, Nepal, China
23.	<b>Campanulaceae;</b> <i>Cyananthus lobatus</i>			Patalh od	50							50		50	Ornamental	Himalayas from Himachal Pradesh to SW china
24.	<b>Asteraceae;</b> <i>Myriactis wallichii</i>			Patalh od	50							50		50	Medicinal	China, Indian subcontinent, Southeast Asia
25.	<b>Asteraceae;</b> <i>Erigeron annuus</i> (L.) Pers.												10 (Gaja) Wild flowers	10	Ornamental	Native to America and naturalised in hill stations of North India.
26.	<b>Lamiaceae;</b> <i>Pogostemon benghalensis</i> (Burm.f.) Kuntze												2(Gaja) Wild flowers	2	Ornamental	Native to India
27.	<b>Polygonaceae;</b> <i>Fagopyrum esculentum</i> Moench												2(Gaja) Wild flowers	2	Vegetable	Native to Asia
28.	<b>Gesneriaceae;</b> <i>Chirita bifolia</i> D.Don												10(Gaja) Wild flowers	10	Ornamental	Native range are Himalayas
		Two leaved chirita														

29.	<b>Liliaceae;</b> <i>Theropogon pallidus</i> (Wall. ex Kunth)											2(Gaja) Wild flowers		2	Ornamental	Native range are Himalayas
30.	<b>Ranunculaceae;</b> <i>Thalictrum virgatum</i> Hook.f. & Thomson											2(Gaja) Wild flowers		2	Ornamental	Native to Himalayas
		Virgate meadow rue														
31.	<b>Rosaceae;</b> <i>Rosa brunonii</i> Lindl.			Gaja	70							2(Gaja) Wild flowers		72	Rose water	Native to central and western Himalayas.
		Himalayan musk rose														
32.	<b>Ranunculaceae;</b> <i>Anemone vitifolia</i> Buch. Ham.ex DC.											2(Gaja) Wild flowers		2	Medicinal	From Afghanistan to South west China to Myanmar.
		Agali														
33.	<b>Asteraceae;</b> <i>Ainsliaea aptera</i> DC.			Devvan	12									12	Ornamental	India, Nepal, and Bhutan
		Koru														
34.	<b>Nyctaginaceae;</b> <i>Mirabilis jalapa</i>			Kalika	5									5	Medicinal	Native to Mexico
		4 o' clock														
35.	<b>Melastomataceae;</b> <i>Melastoma malabathricum</i>			Kalika	10									10	Medicinal	Native to tropical Asia and Polynesia, and Australia
		Malabar														
36.	<b>Gesneriaceae;</b> <i>Chirita pumila</i>											20(Gaja) Wild flowers		20	Ornamental	Extends from Himachal to Vietnam

37.	<b>Scrophulariaceae;</b> <i>Buddleia asiatica</i>	 Butterfly Bush										1 (Gaja) Wild flowers; 10 (Aromatic Project Site, Lalkuan)		11	Ornamental	Native to India, Malayasia, China, Burma and Pakistan.
38.	<b>Gesneriaceae;</b> <i>Rhynchoglossum obliquum</i>											20 (Gaja) Wild flowers		20	Ornamental	Uttarakhand to North East India and Burma.
39.	<b>Verbenaceae;</b> <i>Psuedocaryopteris bicolor</i> (Roxb. Ex Hardw.)	 Blue mist shrub		Gaja	1							1 (Gaja) Wild flowers		1	-	Native to Himalayas
40.	<b>Lamiaceae;</b> <i>Salvia lanata</i> Roxb.	 Woolly sage		Gaja	30								1 (Gaja) Wild flowers	31		Native to Himalayas

## XII. Palm Species:

Palm Species are being conserved at Palmetum at Research Range, Haldwani.

S. No.	Family; Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Uttara khand Govt. / Indian Biodiversity Portal)	Nursery								Total	Experiment Site	Preservati on Plot	Grand Total	Use	Native Region
				Nursery name													
				1		2		3		4							
Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery name	No. Of plant										
1.	<b>Areaceae;</b> <i>Chamaedorea metallica</i> O.F. Cook ex H.E. Moore	 Metal Palm										1 (Palmetum)		1	Ornamental	Native to Southeastern Mexico	
2.	<b>Asparagaceae;</b> <i>Beaucarnea recurvata</i> Lem.	 Ponytail palm	Critically Endangered (IUCN)									4 (Palmetum)		4	Ornamental	Native to the states of Tamaulipas, Veracruz and San Luis Potosí in eastern Mexico	
3	<b>Areaceae;</b> <i>Livistona chinensis</i> (Jacq.) R. Br.	 Chinese Fan Palm										4 (Palmetum)		4	Ornamental	Native to Southern Japan, Taiwan	
4	<b>Areaceae;</b> <i>Thrinax radiata</i> Lodd. ex Schult. & Schult.f.	 Thatch Palm	Least Concern (IUCN)									4 (Palmetum)		4	Ornamental	Native to many Caribbean islands, Central America, and far Southern Florida.	
5	<b>Areaceae;</b> <i>Hyophorbe lagenicaulis</i> (L.H. Baily) H.E. Moore	 Bottle palm	Critically endangered (IUCN)									42 (Palmetum)		42	Ornamental	Native to Round Island, Mauritius.	

6	<b>Areaceae;</b> <i>Ravenea rivularis</i> Jum. & H. Perrier	 Majestic Palm	Vulnerable (IUCN)									4 (Palmetum)		4	Ornamental	Native to South central Madagascar
7	<b>Areaceae;</b> <i>Thrinax parviflora</i> (Burret) Borhidi & Muniz	 Broom Palm										3 (Palmetum)		3	Ornamental	Endemic to the Blue Mountains of Jamaica
8	<b>Areaceae;</b> <i>Wodyetia bifurcata</i> A.K. Irvine	 Foxtail Palm	Conservation Dependent (IUCN)									3 (Palmetum)		3	Ornamental	Endemic to a remote area in Queensland, Australia
9	<b>Areaceae;</b> <i>Caryota rumphiana</i> Mart.	 Fish tail fern										4 (Palmetum)		4	Ornamental	Native to Philippines, Sulawesi, Maluku, New Guinea, Solomon Islands, Bismarck Archipelago.
10	<b>Areaceae;</b> <i>Chamaedorea costaricana</i> Oerst.	 Bamboo Palm										4 (Palmetum)		4	Ornamental	Native to Costa Rica
11	<b>Areaceae;</b> <i>Cocos nucifera</i> L.	 Coconut										2 (Palmetum)		2	Ornamental	Native to tropical islands in the western Pacific.
12	<b>Areaceae;</b> <i>Dypsis leptocheilos</i>	 Red neck palm	Critically endangered (IUCN)									4 (Palmetum)		4	Ornamental	Native to Madagascar

13	<b>Areaceae;</b> <i>Dypsis lutescens</i> (H. Wendl.) Beentje & J. Dransf.	 Golden cane palm	Near Threatened (IUCN)									4 (Palmetum)		4	Ornamental	Native to East Madagascar
14	<b>Areaceae;</b> <i>Hydriastele microspadix</i>	 Hydraki Palm										2 (Palmetum)		2	Ornamental	Endemic to the Moluccan Islands of Maluku, and Ceram in Eastern Indonesia.
15	<b>Areaceae;</b> <i>Hyophorbe verschaffeltii</i> H. A.Wendl.	 Spindle Palm	Critically Endangered (IUCN)									4 (Palmetum)		4	Ornamental	Native to Mascarene Islands
16	<b>Areaceae;</b> <i>Phoenix acaulis</i> Roxb.	 Dwarf Date Palm										4 (Palmetum)		4	Ornamental	Native to Northern India, Bhutan and Nepal
17	<b>Areaceae;</b> <i>Rhapis excelsa</i> (Thunb.) A. Henry	 Lady Palm										4 (Palmetum)		4	Ornamental	Native to Southern China and Taiwan
18	<b>Areaceae;</b> <i>Washingtonia robusta</i> H. Wendl.	 Mexican fan Palm	Near Threatened (IUCN)									4 (Palmetum)		4	Ornamental	Native to Western Sonora, and Baja California Sur in Northwestern Mexico.
19	<b>Areaceae;</b> <i>Serenoa repens</i> (Bart.) J.K. Small	 Saw Palm										4 (Palmetum)		4	Ornamental	Native to the Southeastern United States of America

20	<b>Areaceae;</b> <i>Sabal minor</i> (Jacq.) Pers.												4 (Palmetum)		4	Ornamental	Native to the southern United States from North Carolina to Texas and northeast Mexico.
21	<b>Areaceae;</b> <i>Phoenix canariensis</i> Chabaud		Least concern (IUCN)										4 (Palmetum)		4	Ornamental	Native to the Canary Islands
22	<b>Areaceae;</b> <i>Caryota urens</i> L.		Least concern (IUCN)										4 (Palmetum)		4	Ornamental	Native to the Indian Subcontinent
23	<b>Areaceae;</b> <i>Phoenix dactylifera</i> L.												4 (Palmetum); 1 (Buddha Park) 5 (Public Health Garden)		10	Ornamental and Edible	Native to Northern Africa and southwestern Asia.
24	<b>Areaceae;</b> <i>Elaeis guineensis</i> Jacq.		Least Concern (IUCN)										1 (Palmetum)		1	Ornamental	Native to west and southwest Africa
25	<b>Areaceae;</b> <i>Chamaedorea elegans</i> Mart.												9 (Palmetum)		9	Ornamental	Native to eastern Mexico, Guatemala, and Belize (country located on the north eastern coast of Central America)

26	<b>Areaceae;</b> <i>Pritchardia remota</i> Becc.	 Pritchardia Palm	Endangered (IUCN)									4 (Palmetum)		4	Ornamental	Endemic Hawaiian species
27	<b>Areaceae;</b> <i>Chamaerops humilis</i> L.	 European Fan palm	Least concern (IUCN)									2 (Palmetum)		2	Ornamental	Native to continental Europe
28	<b>Areaceae;</b> <i>Veitchia winin</i> H.F. Moore	 Winin Palm										1 (Palmetum)		1	Ornamental	Native to the Vanuatu Islands.
29	<b>Areaceae;</b> <i>Livistona decora</i> (W.Bull) Dowe	 Weeping Cabbage Palm										2 (Palmetum)		2	Ornamental	
30	<b>Areaceae;</b> <i>Acoelorrhaphe wrightii</i> H. Wendl. ex Becc.	 Everglades palm										6 (Palmetum)		6	Ornamental	Native to Florida, the Caribbean and Central America.
31	<b>Areaceae;</b> <i>Adonidia merrillii</i> Becc.	 Christmas palm	Near threatened (IUCN)									4 (Palmetum)		4	Ornamental	Native to the Phillipines.
32	<b>Areaceae;</b> <i>Aiphanes aculeata</i> Willd.	 Ruffle palm										4 (Palmetum)		4	Ornamental	Native to northern South America and Trinidad and Tobago.



33	<b>Areaceae;</b> <i>Aiphanes minima</i> (Gaertn.) Burret												1 (Palmetum)		1	Ornamental	Native to the insular Caribbean from Hispaniola to Grenada.
34	<b>Areaceae;</b> <i>Arenga hookeriana</i> (Becc.) Whitmore	 Hooker Fishtail Palm											1 (Palmetum)		1	Ornamental	Native to the humid forests of the Malaysian peninsula and the southern Thailand.
35	<b>Areaceae;</b> <i>Arenga microcarpa</i>	 Toddy palm											1 (Palmetum)		1	Ornamental	Endemic to Maluku, New Guinea, open lowland areas near streams in Irian Jaya, and the Northern Territory of Australia.
36	<b>Areaceae;</b> <i>Arenga obtusifolia</i>	 Sumatra sugar palm											3 (Palmetum)		3	Ornamental	Native to Java, Peninsular Malaysia, Sumatra and Thailand.
37	<b>Areaceae;</b> <i>Cryosophila warscewiczii</i> (H. Wendl.) Bartlett	 Silver Star Palm											3 (Palmetum)		7	Ornamental	Endemic to Central America.
38	<b>Areaceae;</b> <i>Chamaedorea cataractarum</i> Mart.	 Cat palm											3 (Palmetum)		3	Ornamental	Native to Southern Mexico and Central America.
39	<b>Areaceae;</b> <i>Chamaedorea ernesti augusti</i> H. Wendl.												3 (Palmetum)		3	Ornamental	Native range is S. Mexico to Honduras.

40	<b>Areaceae;</b> <i>Chamaedorea seifrizzi</i>	 Bamboo Palm											4 (Palmetum)		4	Ornamental	Native to Mexico and Central America.
41	<b>Areaceae;</b> <i>Licuala grandis</i> (hort. ex W. Bull) H. Wendl.	 Ruffled Fan Palm											1 (Palmetum)		1	Ornamental	Native to Vanuatu, an island nation in the Pacific.
42	<b>Areaceae;</b> <i>Licuala spinosa</i> Roxb.	 Mangrove fan palm											3 (Palmetum)		3	Ornamental	Native to the moist areas of southeast Asia.
43	<b>Areaceae;</b> <i>Livistona jenkinsiana</i> Kurz	 Major Jenkins' fan palm											3 (Palmetum)		3	Ornamental	Native from Bhutan to Thailand.
44	<b>Areaceae;</b> <i>Livistona rotundifolia</i> (Lam.) Bluem	 Table Palm											4 (Palmetum)		4	Ornamental	Native to the forests of Asia and Australia.
45	<b>Areaceae;</b> <i>Phoenix rupicola</i> T. anders.	 Cliff Date Palm	Near threatened (IUCN)										4 (Palmetum)		4	Ornamental	Native to the mountainous forests of India and Bhutan.
46	<b>Areaceae;</b> <i>Latania verschaffeltii</i> Lemaire	 yellow latan palm	Endangered (IUCN)										3 (Palmetum)		3	Ornamental	Native to Mauritius.
47	<b>Areaceae;</b> <i>Phoenix pusilla</i> Roxb.	 Flour palm											4 (Palmetum)		4	Ornamental	Endemic to southern India and Sri Lanka.

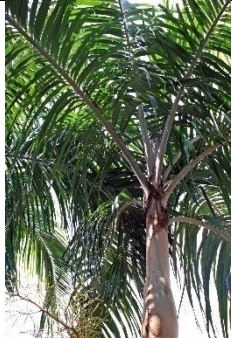




48	<b>Areaceae;</b> <i>Sabal riverside</i>												3 (Palmetum)		3	Ornamental	Native to Mexico
49	<b>Areaceae;</b> <i>Sabal mauritiiformis</i> (H.Karst.) Gr. & H. Wendl.	 Savannah palm											3 (Palmetum)		3	Ornamental	Native to Central America.
50	<b>Areaceae;</b> <i>Ptychosperma macarthurii</i> H. Wendl. ex Hook.f.	 Macarthur palm											3 (Palmetum)		3	Ornamental	Native to southern New Guinea and northern Australia.
51	<b>Areaceae;</b> <i>Ptychosperma lineare</i>	 Cluster Palm											3 (Palmetum)		3	Ornamental	Native from Ethiopia to South Africa and up to western Madagascar.
52	<b>Areaceae;</b> <i>Pritchardia pacifica</i> Seem. & H. Wendl.	 Fiji fan palm											3 (Palmetum)		3	Ornamental	Native to Fiji in the southwest Pacific Ocean.
53	<b>Areaceae;</b> <i>Caryota mitis</i> Lour.	 Clustering fishtail palm	Least concern (IUCN)										3 (Palmetum)		5	Ornamental	Native to Southeast Asia from India to Java to Southern China.
54	<b>Areaceae;</b> <i>Archontophoenix alexandrae</i> (F. Muell.)H.Wendl. &Drude	 King Palm											2 (Palmetum)		2	Ornamental	Native to Queensland and New South Wales, Australia, and naturalised in Hawaii and parts of Florida.
55	<b>Areaceae;</b> <i>Archontophoenix cunninghamiana</i> (F. Muell.)H.Wendl. &Drude	 Bungalow palm											3 (Palmetum)		3	Ornamental	Endemic to Australia.

56	<b>Areaceae;</b> <i>Trachycarpus takil</i> Becc.	 Kumaon fan palm	Rare (ENVIS Endemic and Threatened taxa); Threatened (As per Uttarakhand Biodiversity Board); Rare (Indian Biodiversity Portal)	Patalhod	50	Mandal	4						1 (Palmetum)		1	Ornamental and Handicrafts	Endemic
57	<b>Areaceae;</b> <i>Borassus flabellifer</i> L.	 Palmyra palm				Haldwani	4						3 (State trees of India)		3	Ornamental and Handicrafts	Native to tropical regions of Africa, Asia and New Guinea
58	<b>Areaceae;</b> <i>Sabal rosei</i>	 Savannah Palmetto											1 (Palmetum)		1	Ornamental	Native to Mexico Northwest, Mexico Southwest.
59	<b>Areaceae;</b> <i>Latina rubra</i>	 Latan palm											1 (Palmetum)		1	Ornamental	Native to Ireland
60	<b>Areaceae;</b> <i>Chamaedorea arenbergiana</i>	 Chamaedorea arenbergiana											4 (Palmetum)		4	Ornamental	Native to Southern Mexico
61	<b>Areaceae;</b> <i>Hydriastele pinangoides</i>	 Hydriastele pinangoides											4 (Palmetum)		4	Ornamental	Native to New Guinea
62	<b>Areaceae;</b> <i>Washingtonia filifera</i>	 Desert fan palm											2 (Palmetum)		2	Ornamental	Native to Southwestern United States and Baja California

63	<b>Areaceae;</b> <i>Aiphanes horrida</i>											2 (Palmetum)		2	Ornamental	Native to northern South America
64	<b>Areaceae;</b> <i>Areca triandra</i>											4 (Palmetum)		4	Ornamental	Native to India, Bangladesh, Cambodia, Laos, Burma and Thailand
65	<b>Areaceae;</b> <i>Arenga wightii</i>											2 (Palmetum)		2	Ornamental	Endemic to India
66	<b>Areaceae;</b> <i>Bentinckia nicobarica</i>											1 (Palmetum)		1	Ornamental	Endemic to Nicobar
67	<b>Areaceae;</b> <i>Dypsis pembana</i>											1 (Palmetum)		1	Ornamental	Endemic to Tanzania
68	<b>Areaceae;</b> <i>Korthalsia laciniosa</i>											3 (Palmetum)		3	Ornamental	It occurs in Java, Sumatra, the Philippines, Malay Peninsula, Vietnam, Cambodia and in Indochina, and the Nicobar and Andaman Islands.
69	<b>Areaceae;</b> <i>Licuala peltata</i>											3 (Palmetum)		3	Ornamental	It is found in South Asia and Southeast Asia.

70	<b>Areaceae;</b> <i>Licuala peltata</i> var. 'sumawongii'												3 (Palmetum)		3	Ornamental	It is native to Malaysia and, and southern Thailand.
71	<b>Areaceae;</b> <i>Licuala rumphii</i>												1 (Palmetum)		1	Ornamental	
72	<b>Areaceae;</b> <i>Rhapis humilis</i>												1 (Palmetum)		1	Ornamental	It is is native to China.
73	<b>Areaceae;</b> <i>Roystonea borinquena</i>	 Puerto Rico royal palm											1 (Palmetum)		1	Ornamental	It is native to Hispaniola, Puerto Rico and the Virgin Islands.
74	<b>Areaceae;</b> <i>Pinanga coronata</i>		Near Threatened (IUCN)										1 (Palmetum)		1	Ornamental	Sumatra, Java, to Lesser Sund Islands.
75	<b>Areaceae;</b> <i>Dypsis decaryi</i>	 Triangle palm	Vulnerable (IUCN)										2 (Palmetum)		2	Ornamental	
76	<b>Areaceae;</b> <i>Ptychosperma macarthurii</i>												3 (Palmetum)		3	Ornamental	Its native range is northern Cape York Peninsula in Queensland and New Guinea.






77	<b>Areaceae;</b> <i>Ptychosperma waitianum</i>												2 (Palmetum)		2	Ornamental	It is found in Bav District. Papua New Guinea.
78	<b>Areaceae;</b> <i>Sabal etonia</i>												2 (Palmetum)		2	Ornamental	It is native only to peninsular Florida in the United States
79	<b>Areaceae;</b> <i>Nypa fruticans</i>												4 (Palmetum)		4	Ornamental	It is native to the coastlines and estuarine habitats of the Indian and Pacific Oceans.
80	<b>Areaceae;</b> <i>Copernicia alba</i>	 Caranday Palm											1 (Palmetum)		1	Ornamental	South American species of palm tree
81	<b>Areaceae;</b> <i>Bismarckia nobilis</i>												2 (Palmetum)		2	Ornamental	Endemic to western and northern Madagascar
82	<b>Areaceae;</b> <i>Phoenix sylvestris</i>	 Silver date palm											2 (Palmetum)		2	Ornamental	Native to southern Pakistan, most of India, Sri Lanka, Nepal, Bhutan, Myanmar and Bangladesh
83	<b>Aracaceae:</b> <i>Trachycarpus fortunei</i>												2 (Palmetum)		2	Ornamental	

84	<b>Aracaceae:</b> <i>Carpentaria acuminata</i>	 Carpentaria palm											2 (Palmetum)		2	Ornamental	Native to tropical coastal regions in the north of Northern Territory, Australia.
85	<b>Aracaceae:</b> <i>Arenga engleri</i>	 Formosa palm, Taiwan sugar palm											2 (Palmetum)		2	Ornamental	Native to Taiwan as well as Japan's Ryukyu Islands.
86	<b>Aracaceae:</b> <i>Normanbya normanbyi</i>	 Black palm	Vulnerable (IUCN)										2 (Palmetum)		2		It is endemic to Queensland and Australia
87	<b>Aracaceae:</b> <i>Licuala paludosa</i>												2 (Palmetum)		2		Native to SouthEast Asia
88	<b>Aracaceae:</b> <i>Wallichia oblongifolia</i>												5 (Palmetum)		5		Native range of this species is Himalaya to China (Yunnan).








**XIII. Cycads:**

**Cycad Species are being conserved at Palmetum Conservatory Area at Research Range, Haldwani.**

S. No	Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Uttarakhand Govt. / Indian Biodiversity Portal)	Nursery								Total	Experiment Site	Preservation Plot	Grand Total	Use	Native Region
				Nursery Name													
				1		2		3		4							
Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant										
1	<b>Zamiaceae;</b> <i>Zamia furfuracea</i> L.F.	 Cardboard Palm	Endangered (IUCN)									4 (Palmetum)		4	Ornamental	Native to Mexico	
2	<b>Zamiaceae;</b> <i>Zamia pumila</i> L.	 Coontie palm	Near Threatened (IUCN)									4 (Palmetum)		4	Ornamental	West Indies	
3	<b>Cycadaceae;</b> <i>Cycas revoluta</i> Thunb.	 Sago Palm	Least Concern (IUCN)									4 (Palmetum)		4	Ornamental	Native to Southern Japan including the Ryukyu Islands	
4	<b>Cycadaceae;</b> <i>Cycas circinalis</i> L.	 Queen Sago Palm	Endangered (IUCN)									4 (Palmetum)		4	Ornamental	Native to Eastern and Southeastern Asia	
5	<b>Zamiaceae;</b> <i>Dioon sp.</i>											1 (Palmetum)		1	Ornamental		






6	<b>Zamiaceae;</b> <i>Zamia fischeri</i> Miq.		Endangered (IUCN)											2 (Palmetum)		2	Ornamental	Endemic to Mexico
7	<b>Zamiaceae;</b> <i>Zamioculcas zamiifolia</i>													3 (Palmetum)		3	Ornamental	Native to Africa
8	<b>Cycadaceae;</b> <i>Cycas zeylanica</i>													3 (Palmetum)		3	Ornamental	Endemic to the Andaman and Nicobar Islands
9	<b>Cycadaceae;</b> <i>Cycas rumphii</i>													3 (Palmetum)		3	Ornamental	Native to Indonesia
10	<b>Zamiaceae;</b> <i>Zamia loddigesii</i>													5 (Palmetum)		5	Ornamental	Endemic to Mexico
11	<b>Zamiaceae;</b> <i>Zamia standleyi</i>													1 (Palmetum)		1	Ornamental	Endemic to Honduras
12	<b>Zamiaceae;</b> <i>Dioon edule</i>													2 (Palmetum)		2	Ornamental	Native to Mexico
13.	<b>Cycadaceae;</b> <i>Cycas andamanica</i>													2 (Palmetum)		2	Ornamental	
14	<b>Zamiaceae;</b> <i>Zamia integrifolia</i>		Near Threatened (IUCN)											2 (Palmetum)		2	Ornamental	Native to the southeastern United States the Bahamas, Cuba, and the Cayman Islands.








15	<b>Zamiaceae;</b>  <i>Zamia sp.</i>												2 (Palmetum)		2	Ornamental	
16	<b>Zamiaceae;</b>  <i>Cycas annaikalensis</i>		Critically Endangered (IUCN)										2 (Palmetum)		2	Ornamental	Native to the state of Kerala in India.
17	<b>Cycadaceae;</b>  <i>Cycas beddomei</i>		Endangered (IUCN)										6 (Palmetum)		6	Ornamental	Endemic to Andhra Pradesh
18	<b>Cycadaceae;</b>  <i>Cycas seshachalamensis</i>												4 (Palmetum)		4	Ornamental	Native to India
19	<b>Cycadaceae;</b>  <i>Cycas orixensis</i>												15 (Cycad garden)		15	Ornamental	Endemic species found in the Indian state of Odisha
20	<b>Cycadaceae;</b>  <i>Cycas pectinata</i>		Vulnerable (IUCN)										5 (Cycad garden)		5	Ornamental	It is found in the northeastern part of India






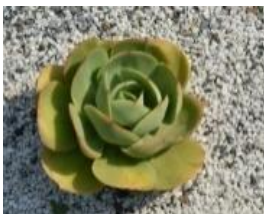

- 2 species are yet to be identified







#### XIV. Cactus/ Succulent Species:







Cactus/ Succulent species are being conserved in Research Range, Haldwani.

S. No	Family; Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Utta rakhand Govt./ Indian Biodiversity Portal)	Nursery						Total	Experiment Site	Preser vation Plot	Grand Total	Use	Native Region
				Nursery Name											
				1		2		3							
Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant										
1.	<b>Crassulaceae;</b> <i>Aeonium arboreum</i>	 Irish rose									2 (Cactus and succulents garden)	2	Ornamental	Native to Atlantic Islands.	
2.	<b>Crassulaceae;</b> <i>Aeonium decorum variegated</i>	 Tree Aeonium									2 (Cactus and succulents garden)	2	Ornamental	Native to Canary Islands.	
3.	<b>Crassulaceae;</b> <i>Aeonium haworthi</i> 'Kiwi'	 Kiwi Verde									2 (Cactus and succulents garden)	2	Ornamental	Native to Canary Islands.	
4.	<b>Crassulaceae;</b> <i>Aeonium castello paivaevareiegata</i>	 Suncup									2 (Cactus and succulents garden); 2 (Succulent trial)	2	Ornamental	Native of Canary islands.	
5.	<b>Crassulaceae;</b> <i>Sedum morganianum</i>	 Donkey's tail									2 (Cactus and succulents garden)	2	Ornamental	Native to Southern Mexico and Honduras.	






6.	<b>Crassulaceae;</b> <i>Sedum pachyphyllum</i>	 Blue Jelly Beans									5 (Cactus and succulents garden); 2 (Succulent Trail)	7	Ornamental	Native to Mexico.
7.	<b>Crassulaceae;</b> <i>Sedum treleasei</i>	 Stonecrop									2 (Cactus and succulents garden)	2	Ornamental	Native to Mexico.
8.	<b>Crassulaceae;</b> <i>Sedum rubrotinctum</i>	 Christmas Cheer									1 (Cactus and succulents garden); 2 (Succulent trail)	3	Ornamental	Native to Mexico.
9.	<b>Crassulaceae;</b> <i>Sedum rubrotinctum</i> 'Aurora'	 Jelly bean plant									4 (Cactus and succulents garden); 9 (Succulent trail)	13	Ornamental	Native to Mexico.
10.	<b>Crassulaceae;</b> <i>Bryophyllum daigremontianum</i>	 Mother of thousand plants									20 (Cactus and succulents garden)	20	Ornamental	Native to Madagascar
11.	<b>Crassulaceae;</b> <i>Bryophyllum delagoense</i>	 Devils back bone									9 (Cactus and succulents garden)	9	Ornamental	Native to Madagascar
12.	<b>Crassulaceae;</b> <i>Kalanchoe millotii</i>	 Millot Kalanchoe									4 (Cactus and succulents garden)	4	Ornamental	Native to Arid parts of Madagascar







13.	<b>Crassulaceae;</b> <i>Kalanchoe thyrsiflora</i>										1 (Cactus and succulents garden)		1	Ornamental	Native to South Africa and Switzerland.
14.	<b>Crassulaceae;</b> <i>Kalanchoe luciae</i>										1 (Cactus and succulents garden); 2 (Succulent trail)		3	Ornamental	
15.	<b>Crassulaceae;</b> <i>Kalanchoe fedtschenkoi</i> 'Kiwi'										3 (Cactus and succulents garden)		3	Ornamental	Native to Madagascar
16.	<b>Crassulaceae;</b> <i>Echeveria runyonii</i>										2 (Cactus and succulents garden); 2 (Succulent trail) 2 (Cactus and succulents garden)		6	Ornamental	Native to Tamaulipas in Mexico.
17.	<b>Crassulaceae;</b> <i>Echeveria lilacina</i>										2 (Cactus and succulents garden); 2 (Succulent trail)		4	Ornamental	Native to Nuevo Leon Mexico.
18.	<b>Crassulaceae;</b> <i>Echeveria mandala</i>										1 (Cactus and succulents garden)		1	Ornamental	Native to Semi desert areas of Central America.
19.	<b>Crassulaceae;</b> <i>Echeveria</i> 'Blue Bird'										2 (Cactus and succulents garden); 2 (Succulent trail)		4	Ornamental	Native to Mexico.








20.	<b>Crassulaceae;</b> <i>Echeveria purple pearl</i>	 Purple Pearl									1 (Cactus and succulents garden)		1	Ornamental	Native to Mexico & USA.
21.	<b>Crassulaceae;</b> <i>Echeveria derenbergii</i>	 Painted Lady									1 (Cactus and succulents garden); 1 (Succulent trail)		2	Ornamental	Endemic to Mexico.
22.	<b>Crassulaceae;</b> <i>Crassula capitella</i>	 Campfire crassula									4 (Cactus and succulents garden); 2 (Succulent trail)		6	Ornamental	Native to South Africa.
23.	<b>Crassulaceae;</b> <i>Crassula ovata</i>	 Skinny fingers									2 (Cactus and succulents garden)		2	Ornamental	Native to Kwazulu Natalin South Africa.
24.	<b>Crassulaceae;</b> <i>Crassula 'Tom thumb'</i>	 Tom Thumb									2 (Cactus and succulents garden); 2 (Succulent trail)		4	Ornamental	Native to South Africa
25.	<b>Crassulaceae;</b> <i>Crassula muscosa</i>	 Watch chain									4 (Cactus and succulents garden); 2 (Succulent trail)		6	Ornamental	Native to South Africa and Namibia








26.	<b>Crassulaceae;</b> <i>Crassula ovata</i>	 Baby jade									1 (Cactus and succulents garden)	1	Ornamental	Native to the KwaZulu Natal and Eastern Cape provinces of South Africa, and Mozambique
27.	<b>Didiereaceae;</b> <i>Portulacaria afra</i>	 Jade plant									2 (Cactus and succulents garden)	2	Ornamental	Native to South Africa.
28.	<b>Crassulaceae;</b> <i>Cotyledon tomentosa</i>	 Bear paw									2 (Cactus and succulents garden)	2	Ornamental	Native to Africa.
29.	<b>Euphorbiaceae;</b> <i>Euphorbia tirucalli</i>	 Pencil Cactus	Under Appendix II (ENVIS)								1 (Cactus and succulents garden)	1	Ornamental	Native to Southern Africa
30.	<b>Euphorbiaceae;</b> <i>Euphorbia milii</i>	 Crown of thorns	Under Appendix II (ENVIS)								4 (Cactus and succulents garden)	4	Ornamental	Native to Madagascar.
31.	<b>Euphorbiaceae;</b> <i>Euphorbia trigona</i> 'rubra'	 African Milk Tree	Under Appendix II (ENVIS)								2 (Cactus and succulents garden)	2	Ornamental	Native to Africa.















32.	<b>Euphorbiaceae;</b> <i>Euphorbia royleana</i>	 Sullu spurge	Under Appendix II (ENVIS)								5 (Cactus and succulents garden)	5	Ornamental	Near Endemic.
33.	<b>Asphodelaceae;</b> <i>Gasteria bicolar</i>										5 (Cactus and succulents garden)	5	Ornamental	Native to South Africa.
34.	<b>Asparagaceae;</b> <i>Sansevieria trifasciata</i>	 Snake Plant									2 (Cactus and succulents garden)	2	Ornamental	Native to Tropical West Africa.
35.	<b>Apocynaceae;</b> <i>Adenium obesum</i>	 Desert rose									10 ( Cactus and succulents garden)	10	Ornamental	Native to Sahel region.
36.	<b>Agavaceae;</b> <i>Agave angustifolia</i>	 Caribbean agave									4 (Cactus and succulents garden); 4 (Succulent trial)	8	Ornamental	Native to Mexico.
37.	<b>Agavaceae;</b> <i>Agave filifera</i>	 Thread Leaf Agave									2 (Cactus and succulents garden)	2	Ornamental	Native to Central Mexico.
38.	<b>Agavaceae;</b> <i>Agave geminiflora</i>	 Twin Flower Agave									2 (Cactus and succulents garden)	2	Ornamental	Endemic to Nayarit.








39.	<b>Agavaceae;</b> <i>Agave potatorum</i>	 Butterfly agave									1 (Cactus and succulents garden); 2 (Succulent trial)	3	Ornamental	Native to Deseat area of Mexico.
40.	<b>Agavaceae;</b> <i>Agave desmettiana</i>	 Smooth Agave									1 (Cactus and succulents garden)	1	Ornamental	Native to Mexico.
41.	<b>Aloaceae;</b> <i>Haworthia cooperi var. picturata</i>	 Cushion aloe									4 (Cactus and succulents garden); 2 (Succulent trial)	6	Ornamental	Native to South Africa.
42.	<b>Aloaceae;</b> <i>Haworthia fasciata</i>	 Zebra Plant									3 (Cactus and succulents garden); 2 (Succulent trial) 5 (Cactus and succulents garden); 2 (Succulent trial)	12	Ornamental	Native to South Africa.
43.	<b>Aloaceae;</b> <i>Aloe 'pink blush'.</i>	 Pink blush									2 (Cactus and succulents garden)	2	Ornamental	Native to South Africa
44.	<b>Aloaceae;</b> <i>Aloe spp.</i>										2 (Cactus and succulents garden) 4 (Cactus and succulents garden)	6	Ornamental	








45.	<b>Aloaceae;</b> <i>Aloe rauhii</i>	 Snowflake aloe									2 (Cactus and succulents garden) 5 (Cactus and succulents garden)	7	Ornamental	Native to Madagascar.
46.	<b>Aloaceae;</b> <i>Aloe spp.</i>										1 (Cactus and succulents garden)	1	Ornamental	
47.	<b>Aloaceae;</b> <i>Dyckia bevilolia</i>	 Sawblade									1 (Cactus and succulents garden)	1	Ornamental	Native to central South America
48.	<b>Aloaceae;</b> <i>Aloe spp.</i>										2 (Cactus and succulents garden)	2	Ornamental	
49.	<b>Aloaceae;</b> <i>Aloe spp.</i>										2 (Cactus and succulents garden)	2	Ornamental	
50.	<b>Aizoaceae;</b> <i>Faucaria tigrina</i>	 Tiger's Jaw									1 (Cactus and succulents garden)	1	Ornamental	Endemic South Africa.
51.	<b>Crassulaceae;</b> <i>Echeveria agavoides</i>	 Lipstick plant									2 (Cactus and succulents garden)	2	Ornamental	Native to Mexico.

52.	<b>Crassulaceae;</b> <i>Echeveria sp.</i>										2 (Cactus and succulents garden)		2	Ornamental	
53.	<b>Crassulaceae;</b> <i>Echeveria pulvinata</i>	 Chinelle plant									2 (Cactus and succulents garden)		2	Ornamental	Native to Mexico.
54.	<b>Crassulaceae;</b> <i>Echeveria elegans</i>	 Mexican snowball									2 (Cactus and succulents garden)		2	Ornamental	Native to Mexico.
55.	<b>Crassulaceae;</b> <i>Echeveria imbricata</i>	 Blue Rose									2 (Cactus and succulents garden)		2	Ornamental	Native to Mexico
56.	<b>Crassulaceae;</b> <i>Pachyphytum viride</i>										2 (Cactus and succulents garden); 9 (Succulent trail)		11	Ornamental	Native to Mexico
57.	<b>Crassulaceae;</b> <i>Pachyphytum bracteosum</i>	 Silver Bracts									2 (Cactus and succulents garden); 2 (Succulent trail)		4	Ornamental	Native to Mexico
58.	<b>Crassulaceae;</b> <i>Pachyphytum hookeri</i>	 Hooker's pachyphytum									2 (Cactus and succulents garden); 2 (Succulent trail)		4	Ornamental	Native to Mexico.








59.	<b>Asteraceae;</b> <i>Senecio serpens</i>										2 (Cactus and succulents garden);2 (Succulent trail)	4	Ornamental	Endemic to South Africa.
		Blue Chalk stick												
60.	<b>Asteraceae;</b> <i>Senecio rowleyanus</i>										1 (Cactus and succulents garden)	1	Ornamental	Native to South west & Africa.
		String of pearls												
61.	<b>Crassulaceae;</b> <i>Sempervivum tectorum</i>										2 (Cactus and succulents garden)	2	Ornamental	Native to Europe.
		Common houseleek												
62.	<b>Crassulaceae;</b> <i>Sempervivum arachnoideum</i>										4 (Cactus and succulents garden)	4	Ornamental	Native to Alps in Europe.
		Cob web												
63.	<b>Apocynaceae;</b> <i>Pachypodium lamerei</i>										1 (Cactus and succulents garden)	1	Ornamental	Native to Madagascar.
		Madagascar Palm												
64.	<b>Crassulaceae;</b> <i>Angelina sedum</i>										1 (Cactus and succulents garden)	1	Ornamental	Native to rocky, mountainous slopes in Europe and Asia.
		Stone crop												






65.	<b>Crassulaceae;</b> <i>Graptoveria 'Fred Ives'</i>										4 (Cactus and succulents garden)		4	Ornamental	Native to California
66.	<b>Aizoaceae;</b> <i>Delosperma echinatum</i>	 Pickle plant									2 (Cactus and succulents garden)		2	Ornamental	Native to South Africa
67.	<b>Agavaceae;</b> <i>Yucca desmetiana</i>	 Yucca plant									2 (Cactus and succulents garden)		2	Ornamental	Native to Northern Mexico.
68.	<b>Asphodelaceae;</b> <i>Haworthia pentagona</i>	 Carrion plant									4 (Cactus and succulents garden)		4	Ornamental	Endemic to Southern Africa
69.	<b>Crassulaceae;</b> <i>Sedeveria rolyi</i>										2 (Succulent trial)		2	Ornamental	Native to Australia
70	<b>Cactaceae;</b> <i>Acanthocereus tetragonus</i>	 Triangle cactus									5 (Cactus and succulents garden)		2	Ornamental	Native to Florida.
71	<b>Cactaceae;</b> <i>Acanthocereus tetragonus variegata</i>	 Fairy castle									2 (Cactus and succulents garden)		2	Ornamental	Native to Brazil







72	<b>Cactaceae;</b> <i>Selenicereus anthonyanus</i>	 Fishbone cactus									2 (Cactus and succulents garden)		2	Ornamental	Native to Mexico.
73	<b>Cactaceae;</b> <i>Astrophytum myriostigma quadricostatum</i>	 Bishop's hat									2 (Cactus and succulents garden)		2	Ornamental	Native to the highlands of northeastern and central Mexico.
74	<b>Cactaceae;</b> <i>Astrophytum myriostigma</i>	 Bishop's cap									2 (Cactus and succulents garden)		1	Ornamental	Native to Texas and central Mexico
75	<b>Cactaceae;</b> <i>Astrophytum asterias</i>	 Sand dollar									2 (Succulent trail)		2	Ornamental	Native to Texas.
76	<b>Cactaceae;</b> <i>Astrophytum asterias 'Super kabuto'</i>	 Sea Urchin									2 (Succulent trail)		2	Ornamental	Native to small parts of Texas in the United States and Mexico
77	<b>Cactaceae;</b> <i>Echinocereus pentalophus</i>	 Ladyfinger Cactus									1 (Cactus and succulents garden)		1	Ornamental	Native to North America.
78	<b>Cactaceae;</b> <i>Echinocactus grusonii</i>	 Golden barrel cactus	Endangered (IUCN)								6 (Cactus and succulents garden) 2 (Cactus and succulents garden)		8	Ornamental	Endemic to Mexico.








79	<b>Cactaceae;</b> <i>Mammillaria vetula</i>	 Thimble Cactus									2 (Cactus and succulents garden)		1	Ornamental	Endemic to Mexican states.
80	<b>Cactaceae;</b> <i>Mammillaria elegans</i>	 Elephant Nipple cactus									2 (Cactus and succulents garden)		2	Ornamental	Native to Mexico.
81	<b>Cactaceae;</b> <i>Mammillaria longimamma</i>	 Pine apple Cactus									1 (Cactus and succulents garden)		1	Ornamental	Native to Mexico.
82	<b>Cactaceae;</b> <i>Mammillaria prolifera</i>	 Texas Nipple Cactus									2 (Cactus and succulents garden)		2	Ornamental	Native to Mexico.
83	<b>Cactaceae;</b> <i>Mammillaria elongata</i>	 Lady Finger cactus									3 (Cactus and succulents garden) 2 (Cactus and succulents garden)		5	Ornamental	Native to Mexico.
84	<b>Cactaceae;</b> <i>Mammillaria grahamii</i>	 Arizon's Fishhook Cactus									2 (Cactus and succulents garden)		2	Ornamental	Native to Mexico.
85	<b>Cactaceae;</b> <i>Mammillaria compressa</i>	 Compressed Nipple Cactus									1 (Cactus and succulents garden)		1	Ornamental	Native to Mexico.


















86	<b>Cactaceae;</b> <i>Mammillaria confusa</i>	 Wolly Nipple Cactus									1 (Cactus and succulents garden)		1	Ornamental	Native to Mexico.
87	<b>Cactaceae;</b> <i>Mammillaria gracilis</i>	 Pincushion cactus									5 (Cactus and succulents garden)		5	Ornamental	Native to Mexico.
88	<b>Cactaceae;</b> <i>Coryphantha sp.</i>										2 (Cactus and succulents garden)		2	Ornamental	
89	<b>Cactaceae;</b> <i>Coryphantha elephantidens</i>	 Elephant's tooth									1 (Cactus and succulents garden)		1	Ornamental	Native to Mexico
90	<b>Cactaceae;</b> <i>Cereus sp. forma monstruosa cristata</i>										1 (Cactus and succulents garden)		1	Ornamental	
91	<b>Cactaceae;</b> <i>Cereus albicaulis</i>	 Sweetpotato cactus									2 (Cactus and succulents garden)		2	Ornamental	Native to Brazil.
92	<b>Cactaceae;</b> <i>Cereus peruvianus monstrose</i>	 Apple cactus									2 (Cactus and succulents garden)		2	Ornamental	Native to Rio de Janeiro in Brazil.








93	<b>Cactaceae;</b> <i>Cereus sp.</i>										6 (Cactus and succulents garden)	6	Ornamental	
94	<b>Cactaceae;</b> <i>Austrocylindr opuntia subulata f. monstrosa</i>	 Eve's Needle									1 (Cactus and succulents garden)	1	Ornamental	Native to Australia and Europe.
95	<b>Cactaceae;</b> <i>Austrocylindr opuntia spp.</i>										1 (Cactus and succulents garden)	1	Ornamental	Native to South America.
96	<b>Cactaceae;</b> <i>Espostoa lanata</i>	 Peruvian Old man cactus									1 (Cactus and succulents garden)	1	Ornamental	Native to Northern Peru, Western Slope of Andes mountains.
97	<b>Cactaceae;</b> <i>Cephalocereus senilis</i>	 Old Man Cactus									4 (Cactus and succulents garden)	4	Ornamental	Native to Esatern Mexico.
98	<b>Cactaceae;</b> <i>Pilosocereus glauscens</i>	 Blue torch cactus									4 (Cactus and succulents garden)	4	Ornamental	Native to Brazil.









99	<b>Cactaceae;</b> <i>Notocactus leninghausii</i>	 Golden Ball cactus									1 (Cactus and succulents garden)		1	Ornamental	Native to Brazil.
100	<b>Cactaceae;</b> <i>Notocactus herteri</i>	 Notocactus									1 (Cactus and succulents garden) 1 (Cactus and succulents garden)		2	Ornamental	Endemic to Brazil.
101	<b>Cactaceae;</b> <i>Pereskia spathulata</i>	 Alfilerillo									2 (Cactus and succulents garden)		2	Ornamental	Native to Australia
102	<b>Cactaceae;</b> <i>Opuntia microdasys</i> <i>var. rufida</i>	 Red Bunny Ears cactus									2 (Cactus and succulents garden)		2	Ornamental	Endemic to Central & Northern Mexico.
103	<b>Cactaceae;</b> <i>Opuntia microdasys</i> <i>var. pallida</i>	 Bunny ear yellow cactus									8 (Cactus and succulents garden)		8	Ornamental	Native to Central & Northern Mexico.
104	<b>Cactaceae;</b> <i>Opuntia microdasys</i> <i>var. albispina</i>	 Bunny Ear white cactus									2 (Cactus and succulents garden)		2	Ornamental	Native to Mexico.

105	<b>Cactaceae;</b> <i>Opuntia monacantha f. monstruosa</i>	 Joseph's coat									80 (Succulent trail)		80	Ornamental	Native to South America.
106	<b>Cactaceae;</b> <i>Opuntia auberi</i>	 Prickly pear									5 (Cactus and succulents garden)		5	Ornamental	Native to Central America in Cuba, Antilles Island.
107	<b>Cactaceae;</b> <i>Opuntia indica</i>	 Barbary Fig									4 (Cactus and succulents garden)		4	Ornamental	Native to Mexico.
108	<b>Cactaceae;</b> <i>Ferocactus horridus</i>	 Barrel Cactus									1 (Cactus and succulents garden)		1	Ornamental	Native to California and Mexico.
109	<b>Cactaceae;</b> <i>Ferocactus hamatacanthus</i>	 Turk's head									4 (Cactus and succulents garden) 2 (Cactus and succulents garden)		6	Ornamental	Mexico
110	<b>Cactaceae;</b> <i>Ferocactus latispinus</i>	 Devil's tongue									4 (Cactus and succulents garden)		4	Ornamental	Native to Mexico.
111	<b>Cactaceae;</b> <i>Ferocactus macrodiscus</i>										2 (Cactus and succulents garden) 2 (Cactus and succulents garden)		4	Ornamental	Native to Mexico.









112	<b>Asphodelaceae;</b> <i>Haworthia retusa</i>	 Star cactus									2 (Cactus and succulent garden)		2	Ornamental	Native to South Africa.
113	<b>Asphodelaceae.</b> <i>Haworthia truncata</i>	 Horse teeth									2 (Cactus and succulent garden)		2	Ornamental	Native to Western South Africa.
114	<b>Asparagaceae;</b> <i>Agave victoria reginae</i>	 Victoria Agave									2 (Cactus and succulent garden)		2	Ornamental	Native to Chihuahuan Desert of Meexico.
115	<b>Asphodelaceae;</b> <i>Haworthiacooperi</i> var. <i>cooperi</i>	 Cooper's haworthia									2 (Cactus and succulent garden)		2	Ornamental	Endemic to South Africa.
116	<b>Cactaceae,</b> <i>Mammillaria plumosa</i>	 Feather cactus									2 (Cactus and succulent garden) 2 (Cactus and succulent garden)		4	Ornamental	Native to Northeastern Mexico.
117	<b>Cactaceae;</b> <i>Tephrocactusarticulatus</i> var. <i>papyracanthus</i>	 Paper spine									2 (Cactus and succulent garden)		2	Ornamental	Distribution in Argentina.
118	<b>Asphodelaceae.</b> <i>Haworthia viscosa</i> var. <i>torquiose</i>	 Button clove									2 (Cactus and succulent garden)		2	Ornamental	Endemic to Southern Africa.
119	<b>Cactaceae;</b> <i>Mammalariae longata</i> crest	 Brain Cactus									2 (Cactus and succulent garden)		2	Ornamental	Native to Columbia, Canada.








120	<b>Asparagaceae;</b> <i>Agave tradewinds</i>										2 (Cactus and succulent garden)			Ornamental	Native to the hot and arid regions of the Americas.
121	<b>Crassulaceae</b> <i>Orostachys boehmeri</i>										2 (Cactus and succulent garden)			Ornamental	Native to Japan.
122	<b>Agavaceae;</b> <i>Furcraeafoetida</i> 'mediopicta										2 (Cactus and succulent garden)			Ornamental	Native to America.
123	<b>Apocynaceae;</b> <i>Huernia schneideriana</i>										2 (Cactus and succulent garden)			Ornamental	Native to Southwest Tanzania
124	<b>Crassulaceae;</b> <i>Kalanchoe humilis</i>										2 (Cactus and succulent garden)			Ornamental	Native to Mozambique.
125	<b>Crassulaceae;</b> <i>Kalanchoe orgyalis</i>										2 (Cactus and succulent garden)			Ornamental	Native to Mozambique.
126	<b>Crassulaceae;</b> <i>Crassula tetragona</i>										2 (Cactus and succulent garden)			Ornamental	Native to Southern Africa.








127	<b>Cactaceae;</b> <i>Cereus tetragonus</i>										2 (Cactus and succulents garden)	2	Ornamental	Native to Florida
128	<b>Cactaceae;</b> <i>Echinopsishuascha var. grandiflora</i>										2 (Cactus and succulents garden)	2	Ornamental	Native to Argentina
129	<b>Euphorbiaceae ;</b> <i>Euphorbia enopla</i>										2 (Cactus and succulent garden)	2	Ornamental	Native to South Africa
130	<b>Cactaceae;</b> <i>Opuntia tuna</i>										1 (Cactus and succulent garden)	1	Ornamental	Native range is Jamaica
131	<b>Cactaceae;</b> <i>Echinopsis 'Red paramount'</i>										2 (Cactus and succulent garden)	2	Ornamental	Native to South America
132	<b>Asteraceae;</b> <i>Senecio jacobsenii</i>										2 (Cactus and succulent garden)	2	Ornamental	Native to Kenya and Tanzania.
133	<b>Asparagaceae;</b> <i>Sansevieria trifasciata</i> moonshine										2 (Cactus and succulent garden)	2	Ornamental	Native to Euope; India & Africa.








134	<b>Crassulaceae;</b> <i>Crassula sarmentosa</i>	 Jade Plant									2 (Cactus and succulent garden)	2	Ornamental	Native to South Africa.
135	<b>Crassulaceae;</b> <i>Crassula sp.</i>										2 (Cactus and succulent garden)	2	Ornamental	
136	<b>Cactaceae;</b> <i>Mammillaria muehlenpfordtii</i>										2 (Cactus and succulent garden)	2	Ornamental	Native to Mexico
137	<b>Asteraceae;</b> <i>Senecio barbertonicus</i>	 Succulent bush									2 (Cactus and succulent garden)	2	Ornamental	Native to Southern Africa
138	<b>Cactaceae;</b> <i>Mammillaria petterssonii</i>										2 (Cactus and succulent garden) 2 (Cactus and succulent garden)	4	Ornamental	Native to Mexico
139	<b>Crassulaceae;</b> <i>Sedum lineare</i>	 Stonecrop									1 (Cactus and succulent garden) 2 (Cactus and succulent garden)	3	Ornamental	Native to East Asia
140	<b>Cactaceae;</b> <i>Echinofossulo crispatus</i>										1 (Cactus and succulent garden)	1	Ornamental	Native to Mexico
141	<b>Cactaceae;</b> <i>Coryphantha compacta</i>	 Pincushion Cactus									1 (Cactus and succulent garden)	1	Ornamental	Native to Mexico
















142	<b>Cactaceae;</b> Unidentified										4 (Cactus and succulents garden)	4	Ornamental	
143	<b>Cactaceae;</b> Unidentified										2 (Cactus and succulent garden)	2	Ornamental	
144	<b>Cactaceae;</b> Unidentified										4 (Cactus and succulent garden)	4	Ornamental	
145	<b>Cactaceae;</b> Unidentified										2 (Cactus and succulent garden)	2	Ornamental	
146	<b>Cactaceae;</b> Unidentified										2 (Cactus and succulent garden)	2	Ornamental	
147	<b>Cactaceae;</b> Unidentified										2 (Cactus and succulent garden)	2	Ornamental	
148	Unidentified										2 (Cactus and succulent garden)	2	Ornamental	
149	<b>Cactaceae;</b> Unidentified										1 (Cactus and succulent garden)	1	Ornamental	

150	<b>Cactaceae;</b> Unidentified										1 (Cactus and succulent garden)	1	Ornamental	
151	<b>Crassulaceae ;</b> <i>Echeveria runyonii</i> cv. <i>Topsy Turvy</i> f. <i>cristata</i>	 Mexican hens									2 (Cactus and succulent garden)	2	Ornamental	Native to Mexico
152	<b>Aizoaceae;</b> <i>Cheiridopsis denticulata</i>	 Carpet weed									2 (Cactus and succulent garden)	2	Ornamental	Native to South Africa
153	<b>Aizoaceae;</b> <i>Titanopsis calcarea</i>	 Jewel plant									2 (Cactus and succulent garden)	2	Ornamental	Indigenous to the arid regions of South Africa and Namibia
154	<b>Crassulaceae;</b> <i>Crassula 'Buddha's Temple'</i>										2 (Cactus and succulent garden)	2	Ornamental	Native to South Africa
155	<b>Crassulaceae ;</b> <i>Echeveria pulvinata</i> 'Frosty'	 White Chenille Plant									2 (Cactus and succulent garden)	2	Ornamental	Native to Mexico
156	<b>Euphorbiaceae;</b> <i>Euphorbia francoisii</i>										2 (Cactus and succulent garden)	2	Ornamental	Native to Madagascar








157	<b>Asphodelaceae;</b> <i>Haworthia limifolia</i>	 Fairies washboard									2 (Cactus and succulent garden)		2	Ornamental	Native to southern Africa
158	<b>Aizoaceae;</b> <i>Cheiridopsis brownii</i>										2 (Cactus and succulent garden)		2	Ornamental	Native to South Africa
159	<b>Aizoaceae;</b> <i>Trichodiadema densum</i>	 Miniature desert rose									2 (Cactus and succulent garden)		2	Ornamental	Native to South Africa
160	<b>Crassulaceae ;</b> <i>Crassula falcata</i>	 Airplane plant									2 (Cactus and succulent garden)		2	Ornamental	Native to South Africa
161	<b>Apocynaceae;</b> <i>Orbea carnos</i>										2 (Cactus and succulent garden)		2	Ornamental	Native to Zimbabwe
162	<b>Asphodelaceae;</b> <i>Aloe haworthioides</i>	 Haworthia leaved Aloe									2 (Cactus and succulent garden)		2	Ornamental	Native to Madagascar
163	<b>Aizoaceae;</b> <i>Lithops comptonii</i>	 Living Stones									2 (Cactus and succulent garden)		2	Ornamental	Native to South Africa

164	<b>Aizoaceae;</b> <i>Lithops lesliei</i>	 Living Stones									2 (Cactus and succulent garden) 6 (Cactus and succulent garden)	8	Ornamental	Native to South Africa
165	<b>Aizoaceae;</b> <i>Lithops hookeri</i>	 Living Stones									2 (Cactus and succulent garden)	2	Ornamental	Native to South Africa
166	<b>Aizoaceae;</b> <i>Pleiospilos nelii</i>	 Splitrock									2 (Cactus and succulent garden)	2	Ornamental	Native to South Africa
167	<b>Aizoaceae;</b> <i>Lithops aucampiae</i>	 Living Stones									2 (Cactus and succulent garden)	2	Ornamental	Native to South Africa
168	<b>Apocynaceae;</b> <i>Orbea dummeri</i>										2 (Cactus and succulent garden)	2	Ornamental	Native to East Africa
169	<b>Asphodelaceae;</b> <i>Haworthia papillosa</i>										2 (Cactus and succulent garden)	2	Ornamental	Native to South Africa
170	<b>Asparagaceae;</b> <i>Calibanus hookeri</i>										2 (Cactus and succulent garden)	2	Ornamental	Native to Mexico







171	<b>Cactaceae;</b> <i>Pseudorhipsalis ramulosa</i>	 Red Rhipsalis									2 (Cactus and succulent garden)	2	Ornamental	Native to Mexico
172	<b>Cactaceae;</b> <i>Rebutia heliosa grafted</i>										2 (Cactus and succulent garden)	2	Ornamental	Native to Mexico
173	<b>Cactaceae;</b> <i>Sulcorebutia rauschii grafted</i>										2 (Cactus and succulent garden)	2	Ornamental	Native to Bolivia
174	<b>Cactaceae;</b> <i>Pachypodium lamerei f. cristata</i>	 Crested Madagascar Palm									2 (Cactus and succulent garden)	2	Ornamental	Native to Madagascar
175	<b>Euphorbiaceae;</b> <i>Euphorbia flanagani f. cristata</i>	 Green coral									2 (Cactus and succulent garden)	2	Ornamental	Native to Mexico
176	<b>Asparagaceae;</b> <i>Sansevieria cylindrica</i>	 Spear Sansevieria									2 (Cactus and succulent garden)	2	Ornamental	Native to Africa
177	<b>Cactaceae;</b> <i>Colocephalocereus purpureus</i>	 Purple Coleocephalocereus									4 (Cactus and succulents garden)	4	Ornamental	Native to Brazil








178	<b>Cactaceae;</b> <i>Epiphyllum oxypetalum</i>	 Queen of the night									4 (Cactus and succulents garden)	4	Ornamental	Native to Mexico
179	<b>Cactaceae;</b> <i>Gymnocalycium anisitsii</i>										4 (Cactus and succulents garden)	4	Ornamental	Native to Brazil
180	<b>Cactaceae;</b> <i>Gymnocalycium bicolor</i>	 Chin cactus									4 (Cactus and succulents garden)	4	Ornamental	Native to Argentina
181	<b>Cactaceae;</b> <i>Gymnocalycium bruchii</i>										4 (Cactus and succulents garden)	4	Ornamental	Native to Argentina
182	<b>Cactaceae;</b> <i>Gymnocalycium baldianum</i>	 Cordoba Naked Chalice Cactus									4 (Cactus and succulents garden) 2 (Cactus and succulent garden)	6	Ornamental	Native to Argentina
183	<b>Cactaceae;</b> <i>Gymnocalycium denudatum</i>	 Spider Cactus									4 (Cactus and succulents garden) 2 (Cactus and succulent garden)	6	Ornamental	Native to Brazil
184	<b>Cactaceae;</b> <i>Gymnocalycium gibbosum 'nobile'</i>										4 (Cactus and succulents garden)	4	Ornamental	Native to Argentina








185	<b>Cactaceae;</b> <i>Gymnocalycium horridispinum</i>										4 (Cactus and succulents garden)	4	Ornamental	Native to South Africa
186	<b>Cactaceae;</b> <i>Gymnocalycium horstii var. bueneckerii</i>										4 (Cactus and succulents garden)	4	Ornamental	Native to South Africa
187	<b>Cactaceae;</b> <i>Gymnocalycium kemerae</i>										4 (Cactus and succulents garden)	4	Ornamental	Native to South America
188	<b>Cactaceae;</b> <i>Gymnocalycium hypiacanthum</i>	 Moon cacti									4 (Cactus and succulents garden)	4	Ornamental	Native to South Africa
189	<b>Cactaceae;</b> <i>Gymnocalycium mihanovichii 'Hiboton'</i>	 Hibotan cactus									4 (Cactus and succulents garden)	4	Ornamental	Native to South America
190	<b>Cactaceae;</b> <i>Gymnocalycium mihanovichii friedrichii</i> (Orange, Pink, variegated)										4 (Cactus and succulents garden)	4	Ornamental	Native to South America
191	<b>Cactaceae;</b> <i>Gymnocalycium mihanovichii frierichii cristate</i>										4 (Cactus and succulents garden)	4	Ornamental	Native to South America









192	<b>Cactaceae;</b> <i>Gymnocalycium mihanovichii</i> 'multicolor'										4 (Cactus and succulents garden)		4	Ornamental	
193	<b>Cactaceae;</b> <i>Gymnocalycium saglionis</i>										4 (Cactus and succulents garden) 3 (Cactus and succulents garden)		7	Ornamental	Native to South America
194	<b>Cactaceae;</b> <i>Hylocereus undatus</i>										4 (Cactus and succulents garden)		4	Ornamental	Native to South America
		Vine like cactus													
195	<b>Cactaceae;</b> <i>Hylocereus lemairei</i>										4 (Cactus and succulents garden)		4	Ornamental	Native to South America
		Pitayas													
196	<b>Cactaceae;</b> <i>Lophophora williamsii</i>										4 (Cactus and succulents garden)		4	Ornamental	Distrubated in southwest United States, northern Mexico, and Peru
		Peyote													
197	<b>Cactaceae;</b> <i>Lophophora williamsii</i> <i>monstrous orange</i>										4 (Cactus and succulents garden)		4	Ornamental	Native to northern Mexico
198	<b>Cactaceae;</b> <i>Mammillaria humboldtii</i>										4 (Cactus and succulents garden)		4	Ornamental	Native to Central Mexico



















199	<b>Cactaceae;</b> <i>Mammillaria polythele</i>										4 (Cactus and succulents garden)	4	Ornamental	Native to Mexico
200	<b>Cactaceae;</b> <i>Mammillaria prolifera</i>	 Texas nipple cactus									4 (Cactus and succulents garden)	4	Ornamental	Native to Central America
201	<b>Cactaceae;</b> <i>Mammillaria pseuperbella</i>	 Pretty nipple cactus									4 (Cactus and succulents garden)	4	Ornamental	Native to Mexico
202	<b>Cactaceae;</b> <i>Mammillaria senilis</i>										4 (Cactus and succulents garden)	4	Ornamental	Native to Mexico
203	<b>Cactaceae;</b> <i>Mammillaria sphaerica</i>	 Pale mammillaria									4 (Cactus and succulents garden)	4	Ornamental	Native to south eastern Texas
204	<b>Cactaceae;</b> <i>Mammillaria spinosissima</i>	 Spiny pincushion cactus									4 (Cactus and succulents garden)	4	Ornamental	Native to Colombia and Venezuela

205	<b>Cactaceae;</b> <i>Matucana madisoniorum</i>										4 (Cactus and succulents garden)	4	Ornamental	Native to Peru
206	<b>Cactaceae;</b> <i>Matucana aurantiaca</i>	 Orange matucana									4 (Cactus and succulents garden)	4	Ornamental	Native to Peru
207	<b>Cactaceae;</b> <i>Melocactus azureus</i>	 Melon cactus									4 (Cactus and succulents garden)	4	Ornamental	Native to Brazil
208	<b>Cactaceae;</b> <i>Melocactus behienseis</i>	 Melocactus									4 (Cactus and succulents garden)	4	Ornamental	Native to Brazil
209	<b>Cactaceae;</b> <i>Melocactus ernestii</i>	 Melocactus									4 (Cactus and succulents garden)	4	Ornamental	Native to East Brazil
210	<b>Cactaceae;</b> <i>Myrtillocactus geometrizans</i>	 Blue Myrtle Cactus									4 (Cactus and succulents garden)	4	Ornamental	Native to Mexico
211	<b>Crassulaceae;</b> <i>Rhodiola trifida</i>			Patalhod	50							50	Ornamental	Native to Asia









212	<b>Crassulaceae;</b> <i>Rhodiola imbricate</i>			Patalthod	50						50		50	Ornamental	Native to Asia
213	<b>Crassulaceae;</b> <i>Rhodiola sinuata</i>			Patalthod	50						50		50	Ornamental	Native to Asia
		Trifid Sedum													
214	<b>Cactaceae;</b> <i>Peresklopsis aculeata</i>											4 (Cactus and succulents garden)	4	Ornamental	
215	<b>Cactaceae;</b> <i>Mammillaria vetula subsp. gracilis</i>											4 (Cactus and succulents garden)	4	Ornamental	
216	<b>Crassulaceae;</b> <i>Kalanchoe tomentosa</i>											4 (Cactus and succulents garden)	4	Ornamental	
217	<b>Crassulaceae;</b> <i>Kalanchoe gastonis-bonnieri</i>											4 (Cactus and succulents garden)	4	Ornamental	
218	<b>Crassulaceae;</b> <i>Sempervivum red tips</i>											4 (Cactus and succulents garden)	4	Ornamental	

219	<b>Crassulaceae;</b> <i>Pachyphytum Oviferum</i> Moonstone										4 (Cactus and succulents garden)		4	Ornamental	
220	<b>Crassulaceae;</b> <i>Echeveria pulidonis</i>										4 (Cactus and succulents garden)		4	Ornamental	Native to central Mexico
221	<b>Crassulaceae;</b> <i>Echeveria</i> 'Vampire Red Ball'										4 (Cactus and succulents garden)		4	Ornamental	
222	<b>Crassulaceae;</b> <i>Echeveria purpusorum</i>										4 (Cactus and succulents garden)		4	Ornamental	Endemic to Puebla and Oaxaca, Mexico.
223	<b>Crassulaceae;</b> <i>Echeveria</i> black prince										4 (Cactus and succulents garden)		4	Ornamental	
224	<b>Crassulaceae;</b> <i>Echeveria</i> 'Pinky'										4 (Cactus and succulents garden)		4	Ornamental	
225	<b>Crassulaceae;</b> <i>Echeveria</i> dark ice										4 (Cactus and succulents garden)		4	Ornamental	
226	<b>Crassulaceae;</b> <i>Echeveria</i> lola										4 (Cactus and succulents garden)		4	Ornamental	

227	<b>Crassulaceae;</b> <i>Senecio rowleyanus</i> <i>variegata</i>										4 (Cactus and succulents garden)	4	Ornamental	
228	<b>Crassulaceae;</b> <i>Crassula capitella</i> <i>Variegata</i>										4 (Cactus and succulents garden)	4	Ornamental	
229	<b>Aizoaceae;</b> <i>Lithops viridis</i>										4 (Cactus and succulents garden)	4	Ornamental	
230	<b>Aizoaceae ;</b> <i>Faucaria tuberculosa</i>										4 (Cactus and succulents garden)	4	Ornamental	Native to southern Cape Provinces of South Africa.
231	<b>Cactaceae;</b> <i>Notocactus scopa</i>										4 (Cactus and succulents garden)	4	Ornamental	Native to upland southern Brazil and Uruguay.
232	<b>Cactaceae;</b> <i>Notocactus mammulosa</i>										4 (Cactus and succulents garden)	4	Ornamental	
233	<b>Cactaceae;</b> <i>Notocactus schumannianus</i>										4 (Cactus and succulents garden)	4	Ornamental	
234	<b>Cactaceae;</b> <i>Notocactus chrysacanthion</i>										4 (Cactus and succulents garden)	4	Ornamental	







235	<b>Cactaceae;</b> <i>Mammillaria bombycina</i>										4 (Cactus and succulents garden)	4	Ornamental	
236	<b>Cactaceae;</b> <i>Mammillaria schiedeana</i>										4 (Cactus and succulents garden)	4	Ornamental	
237	<b>Cactaceae;</b> <i>Rebutia deminuta</i>										4 (Cactus and succulents garden)	4	Ornamental	
238	<b>Cactaceae;</b> <i>Mammillaria hahniana</i>										4 (Cactus and succulents garden)	4	Ornamental	
239	<b>Cactaceae;</b> <i>Mammillaria Hahniana - Multi Headed</i>										4 (Cactus and succulents garden)	4	Ornamental	
240	<b>Cactaceae;</b> <i>Mammillaria zeilmanniana</i>										4 (Cactus and succulents garden)	4	Ornamental	
241	<b>Anacampserotaceae;</b> <i>Anacampseros Rufescens</i>										4 (Cactus and succulents garden)	4	Ornamental	
242	<b>Anacampserotaceae;</b> <i>Anacampseros Rufescens variegata</i>										4 (Cactus and succulents garden)	4	Ornamental	








243	<b>Cactaceae;</b> <i>Hildewintera aureispina</i>										4 (Cactus and succulents garden)	4	Ornamental	
244	<b>Cactaceae;</b> <i>Mammillaria parkinsonii</i>										4 (Cactus and succulents garden)	4	Ornamental	
245	<b>Cactaceae;</b> <i>Mammillaria carmenae</i>										4 (Cactus and succulents garden)	4	Ornamental	
246	<b>Cactaceae;</b> <i>Notocactus magnificus</i>										4 (Cactus and succulents garden)	4	Ornamental	
		Balloon cactus												
247	<b>Cactaceae;</b> <i>Mammillaria Toluca</i>										4 (Cactus and succulents garden)	4	Ornamental	
248	<b>Euphorbiaceae;</b> <i>Euphorbia grandicornis</i>										4 (Cactus and succulents garden)	4	Ornamental	
		Cow's Horn												
249	<b>Bromeliaceae;</b> <i>Cryptanthus zonatus</i>										4 (Cactus and succulents garden)	4	Ornamental	
		Zebra Plant												

250	<b>Bromeliaceae;</b> <i>Cryptanthus zonatus</i> 'Zebrinus'	 Zebra Plant									4 (Cactus and succulents garden)	4	Ornamental	
251	<b>Asphodelaceae;</b> <i>Gasteria sp.</i>										4 (Cactus and succulents garden)	4	Ornamental	
252	<b>Cactaceae;</b> <i>Leuchtenbergia principis</i>										4 (Cactus and succulents garden)	4	Ornamental	Native to north-central Mexico
253	<b>Euphorbiaceae;</b> <i>Euphorbia lactea</i> 'White Ghost'										4 (Cactus and succulents garden)	4	Ornamental	
254	<b>Apocynaceae;</b> <i>Stapelia sp.</i>										4 (Cactus and succulents garden)	4	Ornamental	
255	<b>Crassulaceae;</b> <i>Echeveria setosa</i>	 Mexican fire cracker									4 (Cactus and succulents garden)	4	Ornamental	Native to semi-desert areas of Mexico.
256	<b>Aloaceae;</b> <i>Aloe albiflora</i>										5 (Cactus and succulents garden)	5	Ornamental	Indigenous to Madagascar
257	<b>Cactaceae;</b> <i>Ariocarpus retusus</i>										2 (Cactus and succulents garden)	2	Ornamental	Found mainly in Mexico









258	<b>Asparagaceae;</b> <i>Albuca concordiana</i>										3 (Cactus and succulents garden)	3	Ornamental	Native to southern Namibia, Cape, Karoo and the south-eastern cape in South Africa.
259	<b>Asparagaceae;</b> <i>Drimiopsis Kirkii</i>										3 (Cactus and succulents garden)	3	Ornamental	
260	<b>Asparagaceae;</b> <i>Ledebouria socialis</i>	 Leopard lily									2 (Cactus and succulents garden)	2	Ornamental	Native to the Eastern Cape Province of South Africa.
261	<b>Apocynaceae;</b> <i>Huernia pillansii crest</i>										4 (Cactus and succulents garden)	4	Ornamental	Native to the Cape Provinces of South Africa.
262	<b>Asclepiadaceae;</b> <i>Stapelianthus decaryi</i>										4 (Cactus and succulents garden)	4	Ornamental	
263	<b>Asphodelaceae;</b> <i>Gasteraloe 'Green Ice'</i>										2 (Cactus and succulents garden)	2	Ornamental	
264	<b>Euphorbiaceae;</b> <i>Euphorbia tithymaloides</i>	 Redbird flower									5 (Public Health Garden)	5	Medicinal and Ornamental	Native to tropical and subtropical North America and Central America.

261	Asphodelaceae; <i>Aloe melanocantha</i>							Jollygr ant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
262	Apocynaceae; <i>Boucerosia crenulata</i>							Jollygr ant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
263	Asclepiadaceae; <i>Caralluma socotrana</i>							Jollygr ant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
264	Euphorbiaceae; <i>Euphorbia phillipoides</i>							Jollygr ant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
265	Apocynaceae; <i>Orbea semota subsp. Orientalis</i>							Jollygr ant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
266	Apocynaceae; <i>Orbea semota var lutea</i>							Jollygr ant	2	2	1 (Cactus and succulents garden)		3	Ornamental	

267	<b>Apocynaceae;</b> <i>Pachypodium arid land</i>							Jollygrant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
268	<b>Cactaceae;</b> <i>Bolivicereus samaipatanus v rufus</i>							Jollygrant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
269	<b>Cactaceae;</b> <i>Chamaecereus hybrid 'Tristar'</i>							Jollygrant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
270	<b>Cactaceae;</b> <i>Chamaecereus hybrid opus red</i>							Jollygrant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
271	<b>Cactaceae;</b> <i>Chamaecereus silvestrii</i>							Jollygrant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
272	<b>Cactaceae;</b> <i>Chamaelobivia CV Lincoln gem</i>							Jollygrant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
273	<b>Cactaceae;</b> <i>Echinocereu sinermis var. luteus</i>							Jollygrant	2	2	1 (Cactus and succulents garden)		3	Ornamental	






274	<b>Cactaceae;</b> <i>Echinocereus pentalophus forma monstrosa</i>							Jollygrant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
275	<b>Cactaceae;</b> <i>Hildewintera colademononis</i> (rooted) monkey tail cactus							Jollygrant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
276	<b>Cactaceae;</b> <i>Mammillaria fraileana</i>							Jollygrant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
277	<b>Cactaceae;</b> <i>Mammillaria spinosissima</i> CV. 'Un Pico'							Jollygrant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
278	<b>Cactaceae;</b> <i>Myrtillocactus geometrizans elite crest</i>							Jollygrant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
279	<b>Cactaceae;</b> <i>Opuntia microdasys</i>							Jollygrant	2	2	1 (Cactus and succulents garden)		3	Ornamental	








280	<b>Cactaceae;</b> <i>Opuntia molesta</i>							Jollygr ant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
281	<b>Cactaceae;</b> <i>Setichinopsis mirabilis</i>							Jollygr ant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
282	<b>Cactaceae;</b> <i>Trichocereus spachianus</i>							Jollygr ant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
283	<b>Cactaceae;</b> <i>Trichocereus hybrid super apricot</i>							Jollygr ant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
284	<b>Cactaceae;</b> <i>Wilcoxia leucantha</i>							Jollygr ant	2	2	1 (Cactus and succulents garden)		3	Ornamental	
285	<b>Cactaceae;</b> <i>Wilcoxia schimollii (Echinocereusschm ollii)</i>							Jollygr ant	2	2	1 (Cactus and succulents garden)		3	Ornamental	








19 species are yet to be identified.

**XV. Aquatic Plant Species;**








**Aquatic Plant Species are being conserved at Research Range, Haldwani:**


S. No	Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Utarakhand Govt./ Indian Biodiversity Portal)	Nursery						Total	Experiment Site	Preservation Plot	Grand Total	Use	Native Region
				Nursery Name											
				1		2		3							
Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant										
1.	<b>Nymphaeaceae;</b> <i>Nymphaea alba</i> L.	 Water lily	Least Concern (IUCN)								25 (Aquatic Demonstaration area) 15 (Aquatic area)	40	Ornamental	Native to North Africa.	
2.	<b>Nymphaeaceae;</b> <i>Nymphaea peach glow</i>	 Water lily									30 (Aquatic Demonstaration area) 10 (Aquatic area)	40	Ornamental		
3.	<b>Nymphaeaceae;</b> <i>Nymphaea 'Antares'</i>	 Night blooming water lily									1(Aquatic Demonstaration area)	1	Ornamental		
4	<b>Nymphaeaceae;</b> <i>Nymphaea caerulea</i> Savigny	 Water lily									10 (Aquatic Demonstaration area)	10	Ornamental	Nile river and other parts of East Africa.	
5	<b>Nymphaeaceae;</b> <i>Nymphaea nouchali</i> Burm.f.	 Water lily									10 (Aquatic Demonstaration area)	10	Ornamental	Native to Southeast Asia.	







6	<b>Nymphaeaceae;</b> <i>Nymphaea</i> <i>'Aphrodite'</i>										10 (Aquatic Demonstaration area)	10	Ornamental	
		Tropical water lily												
7	<b>Araceae;</b> <i>Pistia stratiotes</i> L.		Least concern (IUCN)								30(Aquatic Demonstaration area)	30	Ornamental	First discovered from the Nile near Lake Victoria in Africa.
		water cabbage/ water lettuce												
8	<b>Salviniaceae;</b> <i>Salvinia natans</i> (L.) All.		Least concern (IUCN)								10(Aquatic Demonstaration area)	10	Ornamental	Native to Algeria, Egypt, Libya, Morocco, and Tunisia
		Floating fern												
9	<b>Onagraceae;</b> <i>Ludwigia sedioides</i> (Humb. & Bonpl.) H. Hara										1 (Aquatic Demonstaration area)	1	Ornamental	Native to Brazil and Venezuela.
		Water mosaic												
10	<b>Alismataceae;</b> <i>Hydrocleys nymphoides</i> (Hum.& Bon. ex Willd.) Buchenau										1(Aquatic Demonstaration area)	1	Ornamental	Native to Central and South America
		Water poppy												
11	<b>Menyanthaceae;</b> <i>Nymphoides geminata</i> (R. Br.) Kuntze										1(Aquatic Demonstaration area)	1	Ornamental	Native to eastern Australia.
		Yellow Snowflake												
12	<b>Menyanthaceae;</b> <i>Nymphoides cristata</i>										1(Aquatic Demonstaration area)	1	Ornamental	Native to tropical Asia.
		Floating heart												






13	<b>Nymphaeaceae;</b> <i>Nuphar lutea</i> Smith										1 (Aquatic Demonstaration area)	1	Ornamental and Medicinal	Native to temperate regions of Europe, NW Africa, and western Asia.
14	<b>Araceae;</b> <i>Colocasia esculenta</i> (L.) Schott		Least concern (IUCN)								1(Aquatic Demonstaration area)	1	Edible	
15	<b>Cyperaceae;</b> <i>Cyperus haspan</i> L.										1 (Aquatic Demonstaration area)	1	Ornamental	Native range is Tropics &Subtropical regions of southern Asia, Madagascar and Africa.
16	<b>Araliaceae;</b> <i>Hydrocotyle vulgaris</i> L.		Least concern (IUCN)								1 (Aquatic Demonstaration area)	1	Ornamental	Native to N. Africa and Europe.
17	<b>Cannaceae;</b> <i>Canna glauca</i> L.										3 (Aquatic Demonstration area)	3	Ornamental	Native to the wetlands of tropical America.
18	<b>Heliconiaceae;</b> <i>Heliconia rostrata</i> ruiz & Pavon										1(Aquatic Demonstration area)	1	Ornamental	Native to the tropical Americas.
19	<b>Apiaceae;</b> <i>Hydrocotyle verticillata</i> Thunb.										1(Aquatic Demonstration area)	2	Ornamental	Native range is Tropical & Subtropical America.






20	<b>Nelumbonaceae;</b> <i>Nelumbo nucifera</i> Gaertn.		Data deficient (IUCN)								2(Aquatic Demonstration area)		4	Ornamental and Medicinal	Native to Central and northern India.
21	<b>Apiaceae;</b> <i>Centellia asiatica</i> (L.)Urban	 Mandukparni	Least concern (IUCN)	Tangsa	50	Kalsi	50			100	100 (RET plot, Shyampur); 15000 (Medicinal conservatory, Haldwani) 20 (Public Health Garden)		15120	Medicinal	Wetlands in Asia.
22	<b>Alismataceae;</b> <i>Echinodorous bleherae</i> Rataj	 Amazon sword									2(Aquatic Demonstration area)		2	Ornamental	Native to Cuba, Central America, and South America as far south as Brazil and Bolivia
23	<b>Lemnaceae;</b> <i>Lemna minor</i> L.	 Duckweed	Least concern (IUCN)								200(Aquatic Demonstration area)		200	Bioremedati on a and Livestock feed	Native throughout most of Africa, Asia , Europe and N orth America
24	<b>Pontederiaceae;</b> <i>Eichhornia crassipes</i>										8(Aquatic Demonstration area)		8	Ornamental	Native to the Amazon basin
25	<b>Iridaceae;</b> <i>Iris pseudacorus</i> L.		Least concern (IUCN)								6(Aquatic Demonstration area)		6	Ornamental	Native to Europe, western Asia and northwest Africa
26	<b>Pontederiaceae;</b> <i>Monochoria elata</i>										1( Aquatic Demonstration area)		1	Ornamental	

27	<b>Pontederiaceae;</b> <i>Monochoria vaginalis</i>												Ornamental	Native to temperate and tropical Asia.
28	<b>Linderniaceae;</b> <i>Hemianthus callitrichoides</i> Griseb.	 Dwarf baby tears								5( Aquatic Demonstration area)		5	Ornamental	Native to the islands of The Bahamas, Cuba, Hispaniola, Jamaica, and Puerto Rico.
29	<b>Linderniaceae;</b> <i>Micranthemum tweedii</i>	 Montecarlo pearlweed								5( Aquatic Demonstration area)		5	Ornamental	
30	<b>Nymphaeaceae;</b> <i>Nymphaea</i> 'Southern Charm'	 Purple joy								5( Aquatic Demonstration area)		5	Ornamental	
31	<b>Nymphaeaceae;</b> <i>Nymphaea candida</i> J. Presl	 White Water Lily								5( Aquatic Demonstration area)		5	Ornamental	Native to quiet freshwater habitats in Eurasia
32	<b>Nymphaeaceae;</b> <i>Nymphaea</i> 'Almost Black'	 Black Princess Water lily								5( Aquatic Demonstration area)		5	Ornamental	
33	<b>Nymphaeaceae;</b> <i>Nymphaea</i> "Jakkaphong"	 Jakkaphong								5( Aquatic Demonstration area)		5	Ornamental	

34	<b>Nelumbonaceae;</b> <i>Nelumbo lutea</i> Willd.										5( Aquatic Demonstration area)		5	Ornamental	Native to North America.
		Yellow Lotus													
35	<b>Nelumbonaceae;</b> <i>Nelumbo 'Snow White'</i>										5( Aquatic Demonstration area)		5	Ornamental	
		Snow white Lotus													
36	<b>Nelumbonaceae;</b> <i>Nelumbo 'Drop Blood'</i>										5( Aquatic Demonstration area)		5	Ornamental	
		Drop Blood Lotus													
37	<b>Nymphaeaceae;</b> <i>Nymphaea 'Siam Jasmine'</i>										5( Aquatic Demonstration area)		5	Ornamental	
		'Siam Jasmine Waterlily													
38	<b>Nelumbonaceae;</b> <i>Nelumbo 'Bing Lei Furen'</i>										5( Aquatic Demonstration area)		5	Ornamental	
		Bing Lei Furen Lotus													
39	<b>Nelumbonaceae;</b> <i>Nelumbo nucifera 'Boli Gongzhu'</i>										5( Aquatic Demonstration area)		5	Ornamental	
		'Boli Gongzhu'													
40	<b>Nelumbonaceae;</b> <i>Nelumbo New Star Bowl</i>										5( Aquatic Demonstration area)		5	Ornamental	
		New Star Bowl													






41	<b>Nelumbonaceae;</b> <i>Nelumbo 'Micro Spark'</i>	 Micro Lotus									5 (Aquatic Demonstration area)		5	Ornamental	
42	<b>Nelumbonaceae;</b> <i>Nelumbo spp.</i>	 256 Pettaled Lotus									5 (Aquatic Demonstration area)		5	Ornamental	
43	<b>Nymphaeaceae;</b> <i>Euryale ferox</i>	 Makhana									2 (Aquatic Demonstration area)		2	Ornamental and Edible	Native to eastern Asia and southern Asia
44	<b>Ranunculaceae;</b> <i>Ranunculus sceleratus</i>	 Jal Dhaniya									1 (Aquatic Demonstration area)		1	Medicinal	Native to North America and Eurasia
45	<b>Trapaceae;</b> <i>Trapa natans</i>	 Water Chestnut									50 (Aquatic Demonstration area)		50	Medicinal and Edible	Native to Europe, Asia and Africa
46	<b>Nelumbonaceae;</b> <i>Nelumbo spp.</i>	 Sahastra Kamal									1 (Aquatic Demonstration area)		1	Ornamenta l	-
47	<b>Butomaceae;</b> <i>Butomus umbellatus</i>	 Flowering Rush									1 (Aquatic Demonstration area)		1	Ornamental	Native to Europe and Asia

48	<b>Alismataceae;</b> <i>Sagittaria japonica</i> <i>alba</i>									1 ( Aquatic Demonstration area)		1	Ornamental	Native to wetlands most of Europe from Ireland and Portugal to Finland and Bulgaria
49	<b>Nymphaeaceae;</b> <i>Victoria amazonica</i>									10( Aquatic Demonstration area) 10 (Aquatic area)		10	Ornamental	Native to the Guyana and tropical South America
50	<b>Nelumbonaceae;</b> <i>Nelumbo nucifera</i> <i>'Zhizun Qianban'</i>									2 (Aromatic Garden, Lalkuan)		2	Ornamental	First discovered in southern China in 2009.










2 species are yet to be identified.

**XVI. Insectivorous Species:**






**Insectivorous Species are being conserved at Mandal, Research Range Gopeshwar and Haldwani.**

S. No	Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Uttarakhand Govt./ Indian Biodiversity Portal)	Nursery								Total	Experiment Site	Preservation Plot	Grand Total	Use	Native Region
				Nursery Name													
				1		2		3		4							
				Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant						
1.	<b>Droseraceae;</b> <i>Drosera peltata</i> Sm. ex Willd.	 Mukhjali	Least Concern IUCN Red List	Mandal	30	Patalthod	50					30			80	Medicinal	India, China, Japan, Nepal and Philippines.
2	<b>Lentibulariaceae;</b> <i>Utricularia brachiata</i> Oliv.		Small population / Rare Status of insectivorous plants in northeast India Volume 43 June 2014 , K. K. Rawat and K. Giri	Mandal	50							50			50		Endemic to northeast India.
3	<b>Lentibulariaceae;</b> <i>Utricularia striatula</i> Sm.		Least Concern IUCN Red List	Mandal	100							100			100		Endemic to northeast India.
4	<b>Lentibulariaceae;</b> <i>Utricularia scandens</i> Benj			Mandal	100							100			100		Africa, China, India, Nepal, Thailand and Malaysia.
5.	<b>Lentibulariaceae;</b> <i>Utricularia kumaonsis</i> Oliver.			Mandal	10							10			10		Endemic to Himalaya

6.	<b>Nepenthaceae;</b> <i>Nepenthes ventrata</i>			Haldwani	2	Dehradun	25					27			27		
7.	<b>Nepenthaceae;</b> <i>Nepenthes mirabilis</i>			Haldwani	2	Dehradun	15					17			17		Native to Hong Kong
8.	<b>Nepenthaceae;</b> <i>Nepenthes smilesii</i>			Haldwani	2							2			2		Native to northeastern Thailand, southern Laos, Cambodia, and Vietnam.
9	<b>Nepenthaceae;</b> <i>Nepenthes gaya</i>			Dehradun	20							20	2 (Insectivorous demonstration Area)		22		
10	<b>Nepenthaceae;</b> <i>Nepenthes mirabilis x viking</i>			Dehradun	17							17	2 (Insectivorous demonstration Area)		19		
11	<b>Droseraceae;</b> <i>Drosera adelae</i>			Dehradun	22							22	2 (Insectivorous demonstration Area)		24		
12	<b>Droseraceae;</b> <i>Drosera spatulata</i>			Dehradun	24							24	2 (Insectivorous demonstration Area)		26		
13	<b>Droseraceae;</b> <i>Drosera binata extrima</i>			Dehradun	22							22	2 (Insectivorous demonstration Area)		24		
14	<b>Droseraceae;</b> <i>Drosera beleziana</i>			Dehradun	20							20	2 (Insectivorous demonstration Area)		22		







15	<b>Droseraceae;</b> <i>Drosera filliformis</i>			Dehradun	8							8	2 (Insectivorous demonstration Area)		10		
16	<b>Droseraceae;</b> <i>Drosera tokaiensis</i>			Dehradun	8							8	2 (Insectivorous demonstration Area)		10		
17	<b>Droseraceae;</b> <i>Drosera capillaries</i>			Dehradun	27							27	2 (Insectivorous demonstration Area)		29		
18	<b>Sarraceniaceae;</b> <i>Sarracenia leucophylla x psittacina</i>												2 (Insectivorous demonstration Area)		2		
19	<b>Sarraceniaceae;</b> <i>Sarracenia catesbaei</i>			Dehradun	17							17	2 (Insectivorous demonstration Area)		19		
20	<b>Nepenthaceae;</b> <i>Nepenthes x smilesii</i>			Dehradun	17							17	2 (Insectivorous demonstration Area)		19		
21	<b>Droseraceae;</b> <i>Drosera madagascarensis</i>												2 (Insectivorous demonstration Area)		2		
22	<b>Nepenthaceae;</b> <i>Nepenthes hookeriana</i>			Dehradun	17							17	2 (Insectivorous demonstration Area)		19		
23	<b>Droseraceae;</b> <i>Drosera burmannii</i>			Dehradun	24							24	2 (Insectivorous demonstration Area)		26		













24	<b>Sarraceniaceae;</b> <i>Sarracenia psittacina</i>											2 (Insectivorous demonstration Area)		2		
25	<b>Droseraceae;</b> <i>Dionaea muscipula</i>			Dehradun	8							8	2 (Insectivorous demonstration Area)		10	
26	<b>Sarraceniaceae;</b> <i>Sarracenia x wrigleyana</i> <i>Sarracenia 'Scarlet Belle'</i>			Dehradun	18							18				
27	<b>Droseraceae;</b> <i>Drosera paradoxa</i>			Dehradun	20							20				
28	<b>Sarraceniaceae;</b> <i>Sarracenia x wrigleyana</i>												2 (Insectivorous demonstration Area)		20 2	




**XVII. Lichen Species:**










**Lichen Species are being conserved at Munsyari, Research Range, Pithoragarh.**









S. No	Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Uttarakhand Govt. / Indian Biodiversity Portal)	Nursery								Experiment Site	Preservation Plot	Grand Total	Use	Native Region	
				Nursery Name													Total
				1		2		3		4							
Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant										
1	<b>Megasporaceae;</b> <i>Aspicilia caesiocinerea</i> (L.) Korber											Patalthod				Indian subcontinent	
2	<b>Parmeliaceae;</b> <i>Bulbothrix sensibilis</i> (J. Steiner & Zahlbr.) Hale											Pataltho				Indian and Sri Lanka	
3	<b>Teloschistaceae;</b> <i>Caloplaca himalayana</i> .											Patalthod				India, Bhutan , China and Japan	
4	<b>Parmeliaceae;</b> <i>Cetrelia cetranooides</i> (Del. ex Duby) W. Culb. & C. Culb											Patalthod				India , Nepal and China	
5	<b>Chrysothricaceae</b> <i>Chrysothrix chlorina</i>											Patalthod				India , Nepal and China	
6	<b>Cladoniaceae;</b> <i>Cladonia chlorophaea</i>											Patalthod				India, Bhutan , China and Japan	

7	<b>Cladoniaceae;</b> <i>Cladonia coniocraea</i> (Florke) Spreng.													Patalthod			Antimicrobial	India, Nepal
8	<b>Cladoniaceae;</b> <i>Cladonia corniculata</i> Ahti & Kashiw.													Patalthod			Antimicrobial	India, S. Africa and Australia
9	<b>Cladoniaceae;</b> <i>Cladonia squamulosa</i> Hoffm.													Patalthod			Antimicrobial	India, Nepal and Sri Lanka
10	<b>Coccocarpiaceae;</b> <i>Coccocarpia erythroxyli</i>													Patalthod				India, Bhutan , China and Japan
11	<b>Verrucariaceae;</b> <i>Dermatocarpon minutum</i> (L.) Mann													Patalthod				India and Nepal
12	<b>Parmeliaceae;</b> <i>Everniastrum cirrhatum</i> (Fr.) Hale													Patalthod			Food purpose	India, Nepal, Sri Lanka, S. China and Japan
13	<b>Parmeliaceae;</b> <i>Everniastrum nepalensis</i> (Fr.) Hale													Patalthod			Food purpose	India , Nepal, Bhutan, China and Taiwan
14	<b>Parmeliaceae;</b> <i>Flavoparmelia capirata</i> (L.) Hale													Patalthod				India, Nepal, Sri Lanka, China and Japan
15	<b>Parmeliaceae;</b> <i>Flavopunctilea flaventior</i> (Stirton) Hale													Patalthod				India, Nepal, China and Japan
16	<b>Graphidaceae;</b> <i>Graphis scripta</i> (L.) Ach.													5Patalthod				India and Nepal

17	<b>Physiaceae;</b> <i>Heterodermia leucomelos</i> (L.) Poelt													Patalthod				India, Nepal, Sri Lanka, East and South East Asia and Africa
18	<b>Physiaceae;</b> <i>Heterodermia dactyliza</i>													Patalthod				India, Bhutan , China and Japan
19	<b>Physiaceae;</b> <i>Heterodermia diademata</i>													Patalthod				India, Bhutan , China and Japan
20	<b>Physiaceae;</b> <i>Heterodermia comosa</i>													Patalthod				India, Bhutan , China and Japan
21	<b>Physiaceae;</b> <i>Heterodermia speciosa</i>													Patalthod				India, Bhutan , China and Japan
22	<b>Physiaceae;</b> <i>Heterodermia pseudospeciosa</i>													Patalthod				India, Bhutan , China and Japan
23	<b>Parmeliaceae;</b> <i>Hypotrachyna exsecta</i>													Patalthod				India, Bhutan , China and Japan
24	<b>Teloschistaceae;</b> <i>Ioplaca pindarensis</i> (Rasanen) Poelt & Hinter.													Patalthod				Himalayas
25	<b>Lecanoraceae;</b> <i>Lecanora achroa</i>													Patalthod				India, Bhutan , China and Japan
26	<b>Lecanoraceae;</b> <i>Lecanora concilians</i>													Patalthod				India, Bhutan , China and Japan








27	<b>Lecanoraceae;</b> <i>Lecanora fimbriatula</i>													Patalthod				India, Bhutan , China and Japan
28	<b>Lecanoraceae;</b> <i>Lecanora flavidofusca</i>													Patalthod				India, Bhutan , China and Japan
29	<b>Lecanoraceae;</b> <i>Lecidella elaeochroma</i>													Patalthod				India, Bhutan , China and Japan
30	<b>Lecanoraceae;</b> <i>Lecanora helva</i>													Patalthod				India, Bhutan , China and Japan
31	<b>Lecanoraceae;</b> <i>Lecanora japonica</i>													Patalthod				India, Bhutan , China and Japan
32	<b>Lecanoraceae;</b> <i>Lecanora sulphurescens</i>													Patalthod				India, Bhutan , China and Japan
33	<b>Collemataceae;</b> <i>Leptogium brunitae</i>													Patalthod				India, Bhutan , China and Japan
34	<b>Collemataceae;</b> <i>Leptogium denticulatum</i>													Patalthod				India, Bhutan , China and Japan
35	<b>Collemataceae;</b> <i>Leptogium pedicellatum</i>													Patalthod				India, Bhutan , China andJapan
36	<b>Collemataceae;</b> <i>Leptogium saturninum</i>													Patalthod				India, Bhutan , China and Japan






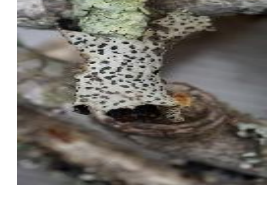



37	<b>Collemaaceae;</b> <i>Leptogium trichophorum</i>																				Patalthod								India, Bhutan , China and Japan
38	<b>Lobariaceae;</b> <i>Lobaria kurokawae</i>																				Patalthod								India, Bhutan , China and Japan
39	<b>Lobariaceae;</b> <i>Lobaria pindarensis</i>																				Patalthod								India, Bhutan , China and Japan
40	<b>Lobariaceae;</b> <i>Lobaria retigera</i>																				Patalthod								India, Bhutan , China and Japan
41	<b>Parmeliaceae;</b> <i>Myelochroa entotheiochroa</i>																				Patalthod								India, Bhutan , China and Japan
42	<b>Nephromataceae;</b> <i>Nephroma helveticum</i>																				Patalthod								India, Bhutan , China and Japan
43	<b>Parmeliaceae;</b> <i>Nephromopsis pallescens</i>																				Patalthod								India, Bhutan , China and Japan
44	<b>Ochrolechiaceae;</b> <i>Ochrolechia rocella</i>																				Patalthod								India, Bhutan , China and Japan
45	<b>Parmeliaceae;</b> <i>Parmelinella wallichian</i>																				Patalthod								India, Bhutan , China and Japan









46	<b>Parmeliaceae;</b> <i>Parmotrema austrosinensis</i>												Patalthod				India, Bhutan , China and Japan
47	<b>Parmeliaceae;</b> <i>Parmotrema hababianum</i>												Patalthod				India, Bhutan , China and Japan
48	<b>Parmeliaceae;</b> <i>Parmotrema mesotropu</i>												Patalthod				India, Bhutan , China and Japan
49	<b>Parmeliaceae;</b> <i>Parmotrema nilgherrense</i>												Patalthod				India, Bhutan , China and Japan
50	<b>Parmeliaceae;</b> <i>Parmotrema reticulatum</i>												Patalthod				India, Bhutan , China and Japan
51	<b>Parmeliaceae;</b> <i>Parmotrema tinctor</i>												Patalthod				India, Bhutan , China and Japan
52	<b>Peltigeraceae;</b> <i>Peltigera pindarensis</i> D.D Awasti & M. Joshi												Patalthod				India and Nepal
53	<b>Peltigeraceae;</b> <i>Peltigera dolichorrhiz</i>												Patalthod				India, Bhutan , China and Japan

54	<b>Peltigeraceae;</b> <i>Peltigera polydactylon</i>														Patalthod				India, Bhutan , China and Japan
55	<b>Peltigeraceae;</b> <i>Peltigera rufescens</i>														Patalthod				India, Bhutan , China and Japan
56	<b>Pertusariaceae;</b> <i>Pertusaria leucosora</i>														Patalthod				Himalaya and South India
57	<b>Pertusariaceae;</b> <i>Pertusaria coronata</i>														Patalthod				India, Bhutan , China and Japan
58	<b>Pertusariaceae;</b> <i>Pertusaria quassaie</i>														Patalthod				India, Bhutan , China and Japan
59	<b>Physciaceae;</b> <i>Phaeophysia hispidula</i> ( Ach.) Moberg														Patalthod				India , Nepal and tropical and subtropical region of the world
60	<b>Lecideaceae;</b> <i>Porpidia albocoerulescens</i>														Patalthod				India, Bhutan , China and Japan
61	<b>Lecideaceae;</b> <i>Porpidia macrocarpa</i>														Patalthod				India, Bhutan , China and Japan



62	<b>Parmeliaceae;</b> <i>Myelochroa arulenta</i>															Patalthod				India, Bhutan , China and Japan
63	<b>Pyrenulaceae;</b> <i>Pyrenula introducta</i>															Patalthod				India, Bhutan , China and Japan
64	<b>Ramalinaceae;</b> <i>Ramalina sinensis</i> Jatta															Patalthod		Food purpose / Perfume industry	China, S. E. Asia and Europe, India and Nepal	
65	<b>Ramalinaceae;</b> <i>Ramalina conduplicans</i> Vain															Patalthod		Food purpose / Perfume industry	East Asia, India and Nepa	
66	<b>Ramalinaceae;</b> <i>Ramalina hossei</i>															Patalthod				India, Bhutan , China and Japan
67	<b>Rhizocarpaceae;</b> <i>Rhizocarpon geographicum</i>															Patalthod				India, Bhutan , China and Japan
68	<b>Stereocaulaceae;</b> <i>Stereocaulon foliolosum</i>															Patalthod				India, Bhutan , China and Japan







69	<b>Stereocaulaceae;</b> <i>Stereocaulon paradoxum</i>															Patalthod			India, Bhutan , China and Japan
70	<b>Stereocaulaceae;</b> <i>Stereocaulon pomiferum</i>															Patalthod			India, Bhutan , China and Japan
71	<b>Stereocaulaceae;</b> <i>Stereocaulon myriocarpum</i> Th. Fr.															Patalthod			India , Nepal, Bhutan, China and Taiwan
72	<b>Loabariaceae;</b> <i>Sticta sp.</i>															Patalthod			India, Bhutan , China and Japan
73	<b>Parmeliaceae;</b> <i>Sulcaria sulcata</i>															Patalthod			India, Bhutan , China and Japan
74	<b>Umbilicariaceae;</b> <i>Umbilicaria indica</i>															Patalthod			India, Bhutan , China and Japan
75	<b>Umbilicariaceae;</b> <i>Umbilicaria yunnana</i>															Patalthod			India, Bhutan , China and Japan
76	<b>Parmeliaceae;</b> <i>Usnea eumitrioides</i>															Patalthod			India, Bhutan , China and Japan
77	<b>Parmeliaceae;</b> <i>Usnea longissima</i> Ach.															Patalthod	Medicin al		India, Nepal , China and Japan









78	<b>Parmeliaceae;</b> <i>Usnea orientalis</i> Mot.															Patalthod			India, Bhutan , China and Japan
79	<b>Parmeliaceae;</b> <i>Usnea pectinata</i> Taylor															Patalthod		Bird nests	India, China Malaysia and Thailand
80	<b>Parmeliaceae;</b> <i>Usnea rubicunda</i>															Patalthod			India, Bhutan , China and Japan
81	<b>Parmeliaceae;</b> <i>Usnea spinulosa</i>															Patalthod			India, Bhutan , China and Japan
82	<b>Verrucariaceae;</b> <i>Verrucaria acrotell</i>															Patalthod			India, Bhutan , China and Japan
83	<b>Chrysothricaceae;</b> <i>Chrysothrix</i> <i>candelaris</i>															Patalthod		Bio Indicato r	India, Bhutan , China and Japan
84	<b>Candelariaceae;</b> <i>Candelaria concolor</i>															Patalthod		Bio Indicato r	India, Bhutan , China and Japan
85	<b>Collamataceae;</b> <i>Collema auriforme</i>															Patalthod		Bio Indicato r	India, Bhutan , China and Japan




**XVIII. Bryophyte species:**

**Bryophyte Species are being conserved at Lingadhar, Research Range, Gaja.**








**A- Moss species**

S. No	Scientific Name	Local Name and Photo	Threat Status (IUCN/Biodiversity Board/ENVIS/BSI/Uttarakh and Govt. / Indian Biodiversity Portal)	Nursery						Experimental Site	Preservation Plot	Total No. Of Plant	Use	Native Region	
				Nursery Name											Total
				1		2		3							
Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant										
1	<b>Entodontaceae;</b> <i>Entodon plicatus</i> C. Muell.									Moss Garden Lingadhar (Sariyataal)		Soil moisture conservation	Southeast Asia		
2	<b>Anomodontaceae;</b> <i>Herpetineuron tocoae</i> (Sull. & Lesq.) Cardot									Moss Garden Lingadhar (Sariyataal)		Soil moisture conservation			
3	<b>Trachypodaceae;</b> <i>Trachypodopsis crisputula</i> (Hook.) Fleisch									Moss Garden Lingadhar (Sariyataal)		Soil moisture conservation			
4	<b>Hypnaceae;</b> <i>Hypnum cupressiforme</i> Hedw.									Moss Garden Lingadhar (Sariyataal)		Soil moisture conservation and Ornamental	Found in all continents except Antarctica.		
5	<b>Polytrichaceae;</b> <i>Atrichum obtusulum</i> (C. Muell.) Jaeg.									Moss Garden Lingadhar (Sariyataal)		Soil moisture conservation	Sikkim, East Nepal, Western Himalaya, Mussoorie, Kerala.		
6	<b>Bryaceae;</b> <i>Rhodobryum roseum</i> (Hedw.) Limpr.	 Rose Moss								Moss Garden Lingadhar (Sariyataal)		Soil moisture conservati and Ornamental	Found throughout most of the continents.		

7	<b>Bryaceae;</b> <i>Bryum capillare</i> L. ex Hedw.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	South & North India, China, Central Asia, North & Central Africa, North & South America.
8	<b>Thuidiaceae;</b> <i>Anomodon minor</i> (Hedw.) Fuernr.	 Rounded tongue moss									Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	East Nepal, Darjeeling, Bhutan, Naga Hills.
9	<b>Mniaceae;</b> <i>Plagiomnium</i> <i>rostratum</i> (Schrader) T. J. Koponen,										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
10	<b>Pottiaceae;</b> <i>Hyophila involuta</i> (Hook.) Jaeg.	 Cement moss									Moss Garden Lingadhar (Sariyataal); Haldwani (Jurassic Garden)			Soil moisture conservation	
11	<b>Dicranaceae;</b> <i>Campylopus</i> <i>involutus</i> (C. Muell.) Jaeg.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	This genus is represented worldwide.
12	<b>Dicranaceae;</b> <i>Campylopus</i> <i>fragilis</i> (Brid.) B.S.G.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	This genus is represented worldwide.
13	<b>Brachytheciaceae</b> ; <i>Brachythecium</i> <i>buchananii</i> (Hook.) Jaeg.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	Common in China, Japan, and the Himalayan region, reaching to Pakistan, Philippines, and Vietnam.
14	<b>Brachytheciaceae</b> ; <i>Brachythecium</i> <i>cameratum</i> (Mitt.) Jaeg.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	East Nepal, Sikkim, Kumaun, Shimla, (Basically a Himalayan species.)








15	<b>Fissidentaceae;</b> <i>Fissidens bryoides</i> Hedw.	 Pocket moss									Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	East Nepal, Khasia Hills, Lower Bengal.
16	<b>Pottiaceae;</b> <i>Pseudosymblyphar</i> <i>is subduriuscula</i> (C. Muell.)										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	East Nepal, Myanmar, Borneo, Philippines, China (Yunnan). ( Basically a South and East Asiatic species)
17	<b>Pottiaceae;</b> <i>Hymenostylium</i> <i>recurvirostre</i> (Hedw.) Dix.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	Darjeeling, Khasia Hills, East Nepal, Bhutan.
18	<b>Stereophyllaceae;</b> <i>Stereophyllum</i> <i>anceps</i> (Bosch & Lac.) Broth.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	Assam, Chhotanagpur, Bangladesh, Kanara, Mahabaleshwar, Ceylon, Thailand, Vietnam, Java, Philippines.
19	<b>Plagiotheciaceae;</b> <i>Sematophyllum</i> <i>subhumile</i> (C. Muell.) Fleisch.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	East Nepal, Upper Assam, Nilgiri, Palni, Myanmar, Thailand, Java. (basically a Southeast Asian species)
20	<b>Fabroniaceae;</b> <i>Levierella</i> <i>fabroniacea</i> C. Muell.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	Darjeeling, East Nepal, East Madhya Pradesh, Western Himalaya Spreading from Africa to China over India.
21	<b>Brachytheciaceae</b> ; <i>Rhynchostegium</i> <i>celebicum</i> (Lac.) Jaeg.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	Upper Assam, Garhwal, Palni, Thailand, Tonkin, Sumatra, Java, Celebes, Philippines. (Basically an Indo Malaysian species)

22	<b>Hypnaceae;</b> <i>Taxiphyllum taxirameum</i> (Mitt.) Fleisch.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	East Nepal, Upper Assam, Arunachal, Darjeeling, Khasia Hills, Bhutan, Orissa, Bangladesh.
23	<b>Hypnaceae;</b> <i>Ectropothecium cyperoides</i> (Hook.) Jaeg.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	East Nepal, Assam, Arunachal, Naga Hills, Garhwal, South India, Sumatra, Java, Celebes, Oceanic Islands; Indomalaya to Oceania.
24	<b>Thuidiaceae;</b> <i>Thuidium koelzii</i> Robinson										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation and Ornamental	East Nepal, Upper Assam, Bhutan, Khasia Hills, Orissa, Mussoorie (Basically a Himalayan species)
25	<b>Pottiaceae;</b> <i>Timmiella anomala</i> (B.S.G.) Limpr.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
26	<b>Funariaceae;</b> <i>Funaria hygrometrica</i> Hedw.	 Bonfire moss									Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
27	<b>Leucodontaceae;</b> <i>Leucodon secundus</i> (Harv.) Mitt.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
28	<b>Dicranaceae;</b> <i>Brothera leana</i> (Sull.) Mull. Hal.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	








29	<b>Hypnaceae;</b> <i>Taxiphyllum</i> <i>barbieri</i> (Cardot & Copp.) Z. Iwats.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation and Ornamental	Native to southeast Asia
30	<b>Neckeraceae;</b> <i>Cryptoleptodon</i> <i>flexuosus</i> (Harv.) Renauld & Cardot.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation and Ornamental	
31	<b>Bryaceae;</b> <i>Bryum</i> <i>argenteum</i> Hedw.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
32	<b>Pottiaceae;</b> <i>Tortella tortuosa</i> (Hedw.) Limpr.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
33	<b>Bryaceae;</b> <i>Rhodobryum giganteum</i> (Schwaegr.) Par.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
34	<b>Sematophyllaceae;</b> <i>Sematophyllum humile</i> ( Mitt.) Broth.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
35	<b>Thuidiaceae;</b> <i>Thuidium</i> <i>cymbifolium</i> (Dozy & Molk.) Dozy & Molk.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	







36	<b>Polytrichaceae;</b> <i>Pogonatum microstomum</i> (R.Br. ex Schwaegr.) Brid.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
37	<b>Thuidiaceae;</b> <i>Haplocladium microphyllum</i> (Hedw.) Broth.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
38	<b>Pottiaceae</b> ; <i>Hydrogonium gracilantum</i> (Mitt.) Chen										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
39	<b>Mniaceae;</b> <i>Mnium cuspidatum</i> Hedw.	 Baby Tooth Moss									Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	Found in North America, Africa and Asia.
40	<b>Orthotrichaceae;</b> <i>Zygodon viridissimus</i> (Dicks.) Brid.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
41	<b>Pottiaceae;</b> <i>Anoetangium clarum</i> Mitt.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
42	<b>Pottiaceae;</b> <i>Atrichum undulatum</i> (Hedw.) P. Beauv.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	It is native to Eurasia and North America.

43	<b>Polytrichaceae;</b> <i>Pogonatum thomsonii</i> (Mitt.) A.Jaeger										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
44	<b>Fissidentaceae;</b> <i>Fissidens crispulus</i> Brid.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
45	<b>Pottiaceae;</b> <i>Anoetangium stracheyanum</i> Mitt.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
46	<b>Pottiaceae;</b> <i>Gymnostomiella vernica</i> (Hook. ex Harv.) <i>M.Fleisch.</i>										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
47	<b>Pottiaceae;</b> <i>Scopelophila ligulata</i> (Spruce) Spruce										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
48	<b>Pottiaceae;</b> <i>Semibarbula orientalis</i> (F.Weber) Wijk & Margad.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
49	<b>Bryaceae;</b> <i>Anomobryum filiforme</i> (Griff.) A.Jaeger										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	It is native to California.

50	<b>Bartramiaceae;</b> <i>Philonotis mollis</i> (Dozy & Molk.) Mitt.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
51	<b>Bartramiaceae;</b> <i>Philonotis thwaitesii</i> Mitt.										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
52	<b>Brachytheciaceae;</b> <i>Eurhynchium riparioide</i> s (Hedw.) P.W. Richards										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
53	<b>Meteoriaceae;</b> <i>Cryptopapillaria</i> <i>fuscescens</i> (Hook.) M.Menzel										Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
54	<b>Anomodontaceae;</b> <i>Anomodon viticulosus</i>										Cryptogamic garden			Soil moisture conservation	
55	<b>Bryaceae;</b> <i>Anomobryum auratum</i>										Cryptogamic garden			Soil moisture conservation	
56	<b>Pottiaceae;</b> <i>Barbula constricta</i>										Cryptogamic garden			Soil moisture conservation	







57	<b>Bryaceae;</b> <i>Brachymeium ochianum</i>											Cryptogamic garden			Soil moisture conservation	
58	<b>Brachythecaceae;</b> <i>Brachythecium procumbens</i>											Cryptogamic garden			Soil moisture conservation	
59	<b>Pottiaceae;</b> <i>Bryoerythrophyllum recurvirostrum</i>											Cryptogamic garden			Soil moisture conservation	
60	<b>Pottiaceae;</b> <i>Didymodon recurvus</i>											Cryptogamic garden			Soil moisture conservation	
61	<b>Entodontaceae;</b> <i>Entodon laetus</i>											Cryptogamic garden			Soil moisture conservation	
62	<b>Funariaceae;</b> <i>Entosthodon wallichii</i>											Cryptogamic garden			Soil moisture conservation	
63	<b>Fabroniaceae;</b> <i>Fabronia pusila</i>											Cryptogamic garden			Soil moisture conservation	

64	<b>Pottiaceae;</b> <i>Hydrogonium arcuatum</i>										Cryptogamic garden			Soil moisture conservation	
65	<b>Pottiaceae;</b> <i>Hydrogonium consanguineum</i>										Cryptogamic garden			Soil moisture conservation	
66	<b>Leucodontaceae;</b> <i>Leucodon sinensis</i>										Cryptogamic garden			Soil moisture conservation	
67	<b>Mniaceae;</b> <i>Mnium laevinerve</i>										Cryptogamic garden			Soil moisture conservation	
68	<b>Plagiotheciaceae;</b> <i>Plagiothecium denticulatum</i>										Cryptogamic garden			Soil moisture conservation	
69	<b>Funariaceae;</b> <i>Physcomitrium pyriforme</i>										Cryptogamic garden			Soil moisture conservation	
70	<b>Mniaceae;</b> <i>Pohlia flexuosa</i>										Cryptogamic garden			Soil moisture conservation	

71	<b>Polytrichaceae;</b> <i>Pogonatum aloides</i>										Crypogamic garden Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
72	<b>Polytrichaceae;</b> <i>Pogonatum perichaetiale</i>										Crypogamic garden			Soil moisture conservation	
73	<b>Plagiotheciaceae;</b> <i>Struckia argentata</i>										Crypogamic garden			Soil moisture conservation	
74	<b>Thuidiaceae;</b> <i>Thuidium assimile</i>										Crypogamic garden			Soil moisture conservation	

**B. Liverworts:**









**Liverworts Species are being conserved at Lingadhar, Research Range Gaja and Haldwani.**

S. No	Scientific Name	Local Name and Photo	Threat Status (IUCN/Biodiversity Board/ENVIS /BSI/Uttarakh and Govt. / Indian Biodiversity Portal)	Nursery					Experimental Site	Preservation Plot	Total No. Of Plant	Use	Native Region
				Nursery Name				Total No. Of Plant					
				Nursery Name	No. Of Plant	Nursery Name	No. Of Plant						
1	<b>Aytoniaceae;</b> <i>Plagiochasma appendiculatum</i> Lehm. & Lindenb.								Moss Garden Lingadhar (Sariyataal)		Soil moisture conservation	widely distributed in western, eastern Himalayas, central India and south India.	
2	<b>Targioniaceae;</b> <i>Targionia hypophylla</i> L.								Moss Garden Lingadhar (Sariyataal)		Soil moisture conservation	It has worldwide distribution in areas with Mediterranean climate.	
3	<b>Aytoniaceae;</b> <i>Reboulia hemisphaerica</i> (L.) Raddi								Moss Garden Lingadhar (Sariyataal)		Soil moisture conservation		
4	<b>Cyathodiaceae;</b> <i>Cyathodium tuberosum</i> Kashyap								Moss Garden Lingadhar (Sariyataal)		Soil moisture conservation		
5	<b>Marchantiaceae;</b> <i>Marchantia polymorpha</i> (L.)	 Umbrella liverwort							Moss Garden Lingadhar (Sariyataal); Haldwani Jurassic Park		Soil moisture conservation	It is found worldwide from tropical to arctic climates.	
6	<b>Marchantiaceae;</b> <i>Marchantia papillata</i> Raddi								Moss Garden Lingadhar (Sariyataal);		Soil moisture conservation		

7	<b>Exormothecaceae;</b> <i>Stephensiella</i> <i>brevipedunculata</i> Kashyap		Endangered (IUCN)						Moss Garden Lingadhar (Sariyataal)		Soil moisture conservation	It is confined to the Western Himalaya in Himachal Pradesh and Uttaranc hal.
8	<b>Aytoniaceae;</b> <i>Asterella</i> <i>wallichiana</i> (Lehm. & Lindenb.) Grolle								Moss Garden Lingadhar (Sariyataal)		Soil moisture conservation	
9	<b>Conocephalaceae;</b> <i>Conocephalum conicum</i> (L.) Dumort.								Moss Garden Lingadhar (Sariyataal)		Soil moisture conservation	
10	<b>Lunulariaceae;</b> <i>Lunularia</i> <i>cruciate</i> (L.) Dumort. ex Lin.								Moss Garden Lingadhar (Sariyataal)		Soil moisture conservation	
11	<b>Exormothecaceae;</b> <i>Aitchisoniella himalayensis</i> Kashyap		Endangered (IUCN)						Moss Garden Lingadhar (Sariyataal)		Soil moisture conservation	Endemic to the north-west Himalayas of India
12	<b>Fossombroniaceae;</b> <i>Fossombronia himalayensis</i> Kashyap.								Moss Garden Lingadhar (Sariyataal)		Soil moisture conservation	
13	<b>Ricciaceae;</b> <i>Riccia fluitans</i> L.	 Floating crystalwort							Moss Garden Lingadhar (Sariyataal)		Soil moisture conservation	
14	<b>Marchantiaceae;</b> <i>Marchantia paleacea</i> Bertol.								Moss Garden Lingadhar (Sariyataal)		Soil moisture conservation	





15	<b>Aytoniaceae;</b> <i>Cryptometrium himalayensis</i> Kashyap								Moss Garden Lingadhar (Sariyatal)			Soil moisture conservation	
16	<b>Cleveaceae;</b> <i>Athalamia pinguis</i> Falc.								Moss Garden Lingadhar (Sariyatal)			Soil moisture conservation	
17	<b>Exormothecaceae;</b> <i>Exormotheca tuberifera</i> Kas hyap								Moss Garden Lingadhar (Sariyatal)			Soil moisture conservation	
18	<b>Ricciaceae;</b> <i>Riccia</i> <i>discolor</i> Lehm. & Lindenb.								Moss Garden Lingadhar (Sariyatal)			Soil moisture conservation	
19	<b>Pelliaceae;</b> <i>Pellia endiviifolia</i> (Dicks.) Dumort								Moss Garden Lingadhar (Sariyatal)			Soil moisture conservation	
20	<b>Petalophyllaceae;</b> <i>Sewardiella tuberifera</i> Kashyap								Moss Garden Lingadhar (Sariyatal)			Soil moisture conservation	
21	<b>Fossombroniaceae;</b> <i>Fossombronia himalayensis</i> Kashyap								Moss Garden Lingadhar (Sariyatal)			Soil moisture conservation	
22	<b>Frullaniaceae;</b> <i>Frullania benjaminiana</i> Inoue								Moss Garden Lingadhar (Sariyatal)			Soil moisture conservation	
23	<b>Frullaniaceae;</b> <i>Frullania dilatata</i> (L.) Dumort.								Moss Garden Lingadhar (Sariyatal)			Soil moisture conservation	It is found in Ireland, Germany, United Kingdom.

24	<b>Frullaniaceae;</b> <i>Frullania muscicola</i>									Cryptogamic garden			Soil moisture conservation	Eastern Himalayas, Western ghats and Western himalayas
25	<b>Lejeuneaceae;</b> <i>Lejeunea tuberculosa</i>									Cryptogamic garden Moss Garden Lingadhar (Sariyataal)			Soil moisture conservation	
26	<b>Lophocoleaceae;</b> <i>Lophocolea bidentata</i>									Cryptogamic garden			Soil moisture conservation	
27	<b>Lophocoleaceae;</b> <i>Lophocolea cuspidate</i>									Cryptogamic garden			Soil moisture conservation	
28	<b>Porellaceae;</b> <i>Porella sp.</i>									Cryptogamic garden			Soil moisture conservation	
29	<b>Lejeuneaceae;</b> <i>Ptychanthus striatus</i>									Cryptogamic garden			Soil moisture conservation	
30	<b>Radulaceae;</b> <i>Radula complanata</i>									Cryptogamic garden			Soil moisture conservation	
31	<b>Ricciaceae;</b> <i>Riccia sp</i>									Cryptogamic garden			Thallus in washed and ground to paste and mixed with jiggery and given to the children affected with ringworms	






**C. Hornworts:**



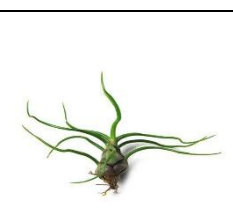




**Hornworts Species are being conserved at Lingadhar, Research Range Gaja and Haldwani.**



S. No	Scientific Name	Local Name and Photo	Threat Status (IUCN/Biodiversity Board/ENVIS/BSI/Uttarakh and Govt. / Indian Biodiversity Portal)	Nursery					Experimental Site	Preservation Plot	Total No. Of Plant	Use	Native Region
				Nursery Name				Total No. Of Plant					
				Nursery Name	No. Of Plant	Nursery Name	No. Of Plant						
1	<b>Anthocerotaceae;</b> <i>Anthoceros erectus</i> Kashyap							Moss Garden Lingadhar (Sariyataal)	-	-	Soil moisture conservation		
2	<b>Anthocerotaceae;</b> <i>Phaeoceros himalayensis</i> Kashyap							Moss Garden Lingadhar (Sariyataal)	-	-	Soil moisture conservation		

## XIX. Other Species:

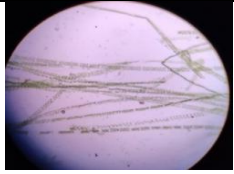



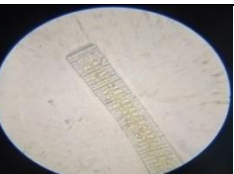
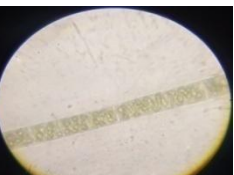

### A. Air Plants species in Haldwani Range

S. No	Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Uttarakhand Govt. / Indian Biodiversity Portal)	Nursery						Total	Experiment Site	Preservation Plot	Grand Total	Use	Native Region
				Nursery Name											
				1		2		3							
Nursery Name	No. Of Plant	Nursery Name	No. Of Plant	Nursery Name	No. Of Plant										
1.	<b>Bromeliaceae;</b> <i>Tillandsia usneoides</i>	 Spanish moss		Haldwani	2					2			2	Air Purifying	Native to Mexico
2.	<b>Bromeliaceae;</b> <i>Tillandsia bulbosa</i>			Haldwani	2					2			2	Air Purifying	Native to Guatemala, Belize, and Central America
3.	<b>Bromeliaceae;</b> <i>Tillandsia chiapensis</i>			Haldwani	2					2			2	Air Purifying	Native to Mexico
4.	<b>Bromeliaceae;</b> <i>Tillandsia ionantha</i>			Haldwani	2					2			2	Air Purifying	Native to Central America & Mexico
5.	<b>Bromeliaceae;</b> <i>Tillandsia mima chiletensis</i>			Haldwani	2					2			2	Air Purifying	Native to Peru
6.	<b>Bromeliaceae;</b> <i>Tillandsia balbisiana</i>			Haldwani	2					2			2	Air Purifying	Native to Mexico

7	<b>Bromeliaceae;</b> <i>Tillandsia</i> 'Sparkler'															
8	<b>Bromeliaceae;</b> <i>Tillandsia capitata</i> <i>domingensis</i>															Native to the UK
9	<b>Bromeliaceae;</b> <i>Tillandsia bulbosa</i> Guatemala															
10	<b>Bromeliaceae;</b> <i>Tillandsia</i> Caput Medusae Sonoran Snow															
11	<b>Bromeliaceae;</b> <i>Tillandsia ionantha</i> mexico															
12	<b>Bromeliaceae;</b> <i>Tillandsia intermedia</i>															Endemic to western Mexico, reported from Guerrero, Sinaloa, and Jalisco.
13	<b>Bromeliaceae;</b> <i>Tillandsia funckiana</i>															Native to Venezuela.

14	<b>Bromeliaceae;</b> <i>Tillandsia harrisii</i>																Endemic to Guatemala.
15	<b>Bromeliaceae;</b> <i>Tillandsia ionantha</i> 'Druid'																

**B . Algae (Haldwani, Gopeshwar and Dehradun Ranges)**

S. No	Scientific Name	Local Name and Photo	Conservation Status (IUCN/Biodiversity Board/ENVIS/Uttarakhand Govt. Indian Biodiversity Portal)	Nursery						Total	Experiment Site	Preservation Plot	Grand Total	Use	Native Region
				Nursery Name											
				1		2		3							
Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant	Nursery. Name	No. Of Plant										
1	<i>Zygnemataceae; Spirogyra spp.</i>										Mandal				
2	Unidentified										Riparian plot Shyampur				
3	<i>Zygnema spp.</i>										Shyampur RET Riparian plot				Freshwater habitats
4	<i>Cymbella lanceolata</i>										Shyampur RET riparian plot				Found in Marine, brackish, fresh, water habitats and sometimes in terrestrial
5	<i>Fragilaria crotonensis</i>										Shyampur RET riparian plot				Associated with freshwater habitat
6	<i>Spyrogyra spp.</i>										Shyampur RET riparian plot			Source of vitamin and minerals	Common in fresh water habitat
7	<i>Scenedesmus acuminatus</i>										Shyampur RET riparian plot				Free floating in rivulet

8	<i>Amphora sp.</i>														Shyampur RET riparian plot				Fresh water diatom
9	<i>Rhizoclonium sp.</i>														Shyampur RET riparian plot			Potential in ethanol production	Common in stagnant water
10	<i>Gomophnema sp.</i>														Shyampur RET riparian plot				Worldwide distribution
11	<i>Cosmarium sp.</i>														Jollygrant Nursery			Used in wastewater treatments coupled with biofuel production under sterilized or nonsterilized conditions.	worldwide distribution
12	<i>Rhizoclonium riparium</i>														Jollygrant Nursery				World distribution: Cosmopolitan, in marine, brackish and some freshwater habitats
13	<i>Melosira sp.</i>														Jollygrant Nursery				Cosmopolitan distribution, and inhabits both freshwater and marine habitats
14	<i>Spirogyra sp.</i>														Jollygrant Nursery				Common in fresh water habitat

• 7 species are yet to be identified



**APENDICES I**

**LIST OF ENDEMIC SPECIES-UTTARAKHAND/INDIAN HIMALAYAN REGION**

<b>S.No.</b>	<b>Scientific Name</b>	<b>Local Name</b>	<b>Page No; Serial No.</b>	<b>Source</b>	<b>Region</b>
1.	<i>Pittosporium eriocarpum</i>	Tumri	(Page No. 41 , S.No 34) (Other tree species)	Endemic; Flowering plant of Uttarakhand. (A Checklist) B.P. Uniyal 2007.	Uttarakhand
2.	<i>Prunus cornuta</i>	Jamoi	(Page No. 47 , S.No 62 ) (Other tree species)	Endemic; Flowering plants of Uttarakhand (A checklist) Uniyal et. al	Uttarakhand
3.	<i>Aconitum balfouri</i>	Meetha vish	(Page No. 110 , S.No 2) (Other herbs)	Broadly Endemic to Uttarakhand; Threatened species of Uttarakhand, P.No. 3 4, Dr. Bhagat Singh Burfal	Uttarakhand
4.	<i>Meizotropis pellita</i>	Patwa	(Page No. 141 , S.No 39) (Other shrubs)	Endemic to Patwadangar (Nainital); An In Vitro Approach for the Conservation of M. pellita: An Endangered and Endemic Plant, Lalit Singh et al American Journal of Plant Science, 2013, 4, 1233 1240	Uttarakhand
5.	<i>Dendrobium fimbriatum</i>		(Page No. 199 , S.No. 8 ) (Orchids)	Endemic; Flowering Plants of Uttarakhand (A Checklist) B.P. Uniyal	Uttarakhand
6.	<i>Trachycarpus takil</i>	Kumaon fan palm	(Page No.258 , S.No 56 ) (Palm)	Endemic; Kumaun Fan Palm: <i>T. takil</i> –in Retrospect B.S. Kholia pp 417 426,2010	Uttarakhand
7.	<i>Berberis lambertii</i>		(Page No.139 , S.No 27 ) (Other Shrubs)	Endemic; Flowering plant of Uttarakhand. (A Checklist) B.P. Uniyal 2007.	Uttarakhand
8.	<i>Quercus floribunda</i>	Moru	(Page No. 32 , S.No 4) (Oak)	Near Endemic; Diversity distribution, use and conservation status of plant species of the west Himalaya, India, S.S Samant, ISSN: 1745 16042(2006)97 104	Uttarakhand
9.	<i>Cinnamomum tamala</i>	Tejpat	(Page No. 36 , S.No 2) (Other tree species)	Near Endemic; Status and distribution pattern of Native and Endemic species in Uttarakhand (WHR)India Dr. Surbhi & Soni Pandey Vol. 4 , Nov.2013, ISSN 2229 5518	Uttarakhand
10.	<i>Juglans regia</i>	Akhrot	(Page No. 37 , S.No 9) (Other tree species)	Near Endemic;Status and distribution pattern of Native and Endemic species in Uttarakhand (WHR)India Dr. Surbhi & Soni Pandey Vol. 4 , Nov.2013, ISSN 2229 5518	Uttarakhand
11.	<i>Grewia oppositifolia</i>	Bhimal	(Page No. 39 , S.No 18) (other tree species)	Near Endemic; Status and distribution pattern of Native and Endemic species in Uttarakhand (WHR)India Dr.Surbhi & Soni Pandey Vol. 4 , Nov.2013	Uttarakhand
12.	<i>Cedrus deodara</i>	Deodara	(Page No. 40 , S.No 28) (other tree species)	Near Endemic; Status and distribution pattern of Native and Endemic species in Uttarakhand (WHR)India Dr.Surbhi & Soni Pandey Vol. 4 , Nov.2013, ISSN 2229 5518	Uttarakhand
13.	<i>Machilus duthiei</i>	Kaula	(Page No. 41 , S.No 31) (other tree species)	Near Endemic; Diversity, distribution use and conservation status of Plant sp. Of MFR W Himalaya S.pant& Samant ISSN:1745 1604	Uttarakhand
14.	<i>Bauhinia retusa</i>	Semel	(Page No. 46 , S.No 59) (Other tree species)	Near Endemic; Status and distribution pattern of Native and Endemic species in Uttarakhand (WHR)India Dr.Surbhi & Soni Pandey Vol. 4 , Nov.2013, ISSN 2229 5518	Uttarakhand

15.	<i>Ulmus wallichiana</i>	Emroyi	(Page No. 47 , S.No 61) (Other tree species)	Near Endemic; Status and distribution pattern of Native and Endemic species in Uttarakhand (WHR)India Dr.Surbhi & Soni Pandey Vol. 4 , Nov.2013, ISSN 2229 5518	Uttarakhand
16.	<i>Rhamnus triqueter</i>	Gonta	(Page No. 49 , S.No 73) (Other tree species)	Near Endemic; Status and distribution pattern of Native and Endemic species in Uttarakhand (WHR)India Dr. Surbhi & Soni Pandey Vol. 4 , Nov.2013, ISSN 2229 5518	Uttarakhand
17.	<i>Cupressus torulosa</i>	Surai	(Page No. 61 , S.No 142) (Other tree species)	Near Endemic; Diversity distribution, use and conservation status of plant species of the west Himalaya, India, S.S Samant, ISSN: 1745 16042(2006)97 104	Uttarakhand
18.	<i>Hedychium spicatum</i>	Kapur Kachri	(Page No. 99 , S.No 4) (Aromatic herbs)	Near Endemic; Status and distribution pattern of Native and Endemic species in Uttarakhand (WHR)India Dr. Surbhi & Soni Pandey Vol. 4 , Nov.2013, ISSN 2229 5518	Uttarakhand
19.	<i>Heracleum candicans</i>	Patrala	(Page No. 102 , S.No 29) (Aromatic herbs)	Near Endemic; The International Journal of Biodiversity Science and Management ISSN: 1745 1604 (print) 1745 1590	Uttarakhand
20.	<i>Geranium wallichianum</i>		(Page No. 110 , S.No 4) (Other herbs)	Near Endemic: Status and distribution pattern of Native and Endemic species in Uttarakhand (WHR)India Dr.Surbhi & Soni Pandey Vol. 4 , Nov.2013, ISSN 2229 5518	Uttarakhand
21.	<i>Lilium polyphyllum</i>	Kshira Kakoli	(Page No. 111 , S.No 5) (Other herbs)	Near Endemic; Status and distribution pattern of Native and Endemic species in Uttarakhand (WHR)India Dr.Surbhi & Soni Pandey Vol. 4 , Nov.2013, ISSN 2229 5518	Uttarakhand
22.	<i>Bergenia ciliata</i>	Pashanbedh	(Page No. 111 , S.No 7) (Other herbs)	Plants of Kedarnath Wildlife Sanctuary, Western Himalaya ; A Field Guide , Ishwari Datt Rai, Gajendra singh and Gopal Singh Rawat. 2017	Uttarakhand
23.	<i>Bergenia stracheyi</i>	Pashanbedh	(Page No. 111 , S.No 8) (Other herbs)	Plants of Kedarnath Wildlife Sanctuary, Western Himalaya ; A Field Guide , Ishwari Datt Rai, Gajendra singh and Gopal Singh Rawat. 2017	Uttarakhand
24.	<i>Eremostachys superba</i>	Mooch	(Page No. 117 , S.No 40) (Other herbs)	Near Endemic; to Shiwaliks or NW India Threatened species of Uttarakhand. B. S. Barfal	Uttarakhand
25.	<i>Cotoneaster bacillaris</i>	Ruins	(Page No. 134 , S.No 2) (Other shrubs)	Near endemic; Status and distribution pattern of Native and Endemic species in Uttarakhand (WHR)India Dr.Surbhi & Soni Pandey Vol. 4 , Nov.2013, ISSN 2229 5518	Uttarakhand
26.	<i>Berberis aristata</i>	Kilmora	(Page No. 136 , S.No 10) (Other shrubs)	Near endemic; Status and distribution pattern of Native and Endemic species in Uttarakhand (WHR)India Dr.Surbhi & Soni Pandey Vol. 4 , Nov.2013, ISSN 2229 5518	Uttarakhand
27.	<i>Skimmia laureola</i>	Kedarpati	(Page No. 136 , S.No 12) (Other shrubs)	Near Endemic; Diversity distribution, use and conservation status of plant species of the west Himalaya, India, S.S Samant, ISSN: 1745 16042(2006)97 104	Uttarakhand
28.	<i>Daphne papyracea</i>	Satpura	(Page No. 139 , S.No 26) (Other shrubs)	Near endemic; Status and distribution pattern of Native and Endemic species in Uttarakhand (WHR)India Dr.Surbhi & Soni Pandey Vol. 4 , Nov.2013, ISSN 2229 5518	Uttarakhand
29.	<i>Viburnum cotinifolium</i>	Guiya	(Page No. 141 , S.No 38) (Other shrubs)	Near Endemic; Diversity distribution, use and conservation status of plant species of the west Himalaya, India, S.S Samant, ISSN: 1745 16042(2006)97 104	Uttarakhand

30.	<i>Indigofera pulchella</i>	Sakina	(Page No. 146 , S.No 70) (Other shrubs)	Near Endemic; Status and distribution pattern of Native and Endemic species in Uttarakhand (WHR)India Dr.Surbhi & Soni Pandey Vol. 4 , Nov.2013, ISSN 2229 5518	Uttarakhand
31.	<i>Euphorbia royleana</i>	Sullu spurge	(Page No. 271 , S.No 32) (Cactus & succulents)	Near Endemic; Status and distribution pattern of Native and Endemic species in Uttarakhand (WHR)India Dr.Surbhi & Soni Pandey Vol. 4 , Nov.2013, ISSN 2229 5518	Uttarakhand
32.	<i>Schrebera swietenoides</i>	Van palas	(Page No. 69 , S.No 184) (other trees)	Near Endemic; Threatened species of Uttarakhand. B. S. Barfal	Uttarakhand
33.	<i>Ficus neriifolia</i>	Dudhla	(Page No. 9 , S.No 4 ) (Ficus)	Plants of Kedarnath Wildlife Sanctuary, Western Himalaya; A Field Guide, Ishwari Datt Rai, Gajendra Singh and Gopal Singh Rawat. 2017	Uttarakhand
34.	<i>Pinus roxburghii</i>	Chir	Page No. 31 , (S.No. 21) (Pine)	Plants of Kedarnath Wildlife Sanctuary, Western Himalaya ; A Field Guide , Ishwari Datt Rai, Gajendra Singh and Gopal singh Rawat. 2017	Uttarakhand
35.	<i>Rhododendron anthopogon</i>	Tagsu	Page No. 34 , (S.No. 4) (Rhododendron)	Plants of Kedarnath Wildlife Sanctuary, Western Himalaya; A Field Guide , Ishwari Datt Rai, Gajendra Singh and Gopal Singh Rawat. 2017	Uttarakhand
36.	<i>Acer caesium</i>	Kanchula	(Page No. 40 , S.No 25) (other tree species)	Plants of Kedarnath Wildlife Sanctuary, Western Himalaya; A Field Guide, Ishwari Datt Rai, Gajendra Singh and Gopal Singh Rawat. 2017	Uttarakhand
37.	<i>Aesculus indica</i>	Pangar	(Page No. 82 , S.No 267) (other tree species)	Plants of Kedarnath Wildlife Sanctuary, Western Himalaya; A Field Guide, Ishwari Datt Rai, Gajendra Singh and Gopal Singh Rawat. 2017	Uttarakhand
38.	<i>Myrica sapida</i>	Shilong Kafal	(Page No. 83 , S.No 268) (other tree species)	Near Endemic; The International Journal of Biodiversity Science and Management, ISSN: 1745 1604(Print)1745 1590, Shreekar Pant & Samant.	Uttarakhand
39.	<i>Ajuga parviflora</i>	Ratpatiya	(Page No. 119 , S.No 55) (Other Herbs)	Near Endemic; The International Journal of Biodiversity Science and Management, ISSN: 1745 1604(Print)1745 1590, Shreekar pant & Samant.	Uttarakhand
40.	<i>Asparagus curillus</i>	Satawar	(Page No. 146 , S.No 67) (Other Shrubs)	Plants of Kedarnath Wildlife Sanctuary, Western Himalaya ; A Field Guide , Ishwari Datt Rai, Gajendra singh and Gopal singh Rawat. 2017	Uttarakhand
41.	<i>Diplomeris hirsuta</i>	Snow Orchid	(Page No. 207 , S.No 68) (Orchid Species)	Threatened species of Uttarakhand. B. S. Barfal	Uttarakhand
42.	<i>Pecteilis gigantean</i>	Butterfly orchid	(Page No. 207 , S.No 66) (Orchid Species)	Threatened species of Uttarakhand. B. S. Barfal	Uttarakhand
43.	<i>Indopiptadenia oudhensis</i>	Gainti	(Page No. 48 , S.No. 67) (Other tree species)	Endemic to Western Himalaya; Phyto sociological analysis and regeneration status of monotypic; Endemic tree in Uttarakhand. H.B Naithani. vol. 141, 6 jun 2015	Indian Himalayan Region
44.	<i>Nardostachys jatamansi</i>	Jatamansi	(Page No. 98 , S.No. 1) (Aromatic herbs)	Endemic Himalaya; THREATENED SPECIES OF UTTARAKHAND P.no 12, Dr. Bhagat Singh Burfal	Indian Himalayan Region
45.	<i>Aconitum hetrophyllum</i>	Atees	(Page No. 110 , S.No 1) (Other herbs)	Pan Endemic in Himalaya; Threatened species of Uttarakhand P.no 5 6, Dr. Bhagat Singh Burfal	Indian Himalayan Region

46.	<i>Saussurea costus</i>	Koot/Kushta	(Page No. 114 , S.No 23) (Other herbs)	Endemic Himalaya; (IHR) Saussurea species in Indian, Himalayan,Region:International, Journ al of Plant Biology · Jan 2010 J. S.Butola	Indian Himalayan Region
47.	<i>Gentiana kurroo</i>	Trayman	(Page No. 114 , S.No 24 ) (Other herbs)	Endemic to Western Himalaya; (Threatened species of Uttarakhand P.no 10, Dr. Bhagat Singh Burfal)	Indian Himalayan Region
48.	<i>Cyathea spinolosa</i>	Tree fern	(Page No. 215 , S.No 1) (Fern)	Pan endemic; Threatened species of Uttarakhand P.no 23 24, Dr. Bhagat Singh Burfal.	Indian Himalayan Region
49.	<i>Utricularia brachiata</i>		(Page No. 316 , S.No 2 ) Insectivorous plants	Endemic to northeast India ,Status of insectivorous plants in northeast India Volume 43 June 2014	Indian Himalayan Region
50.	<i>Angelica glauca</i>	Choru	(Page No. 100 , S.No 16) (Aromatic Herbs)	Endemic Himalaya (IHR); Technology for propagation and cultivation of A. Glauca: A threatened high value Himalayan medicinal cum edible herb. Jitendra Singh Butola et. all, Medicinal Plants, 2 (1) January 2010	Indian Himalayan Region
51.	<i>Allium stracheyi</i>	Faran	(Page No. 98 , S.No 3 ) (Aromatic herbs)	Plants of Kedarnath Wildlife Sanctuary, Western Himalaya ; A Field Guide , Ishwari Datt Rai, Gajendra singh and Gopal Singh Rawat. 2017	Indian Himalayan Region
52.	<i>Utricularia kumaonsis</i>		(Page No. 316 , S.No 5) Insectivorous plants	Bladderworts of India by M.K. Janarthanam and A.N.Henry , BSI Coimbatore 17July 1992	Indian Himalayan Region
53.	<i>Trillium govanianum</i>	Nagchatri	(Page No. 113 , S.No 16 ) (Other Herbs)	Trillium govanianum, Himalayan Trillium THE IUCN RED LIST OF THREATENED SPECIES	Indian Himalayan Region
54.	<i>Stephensiella brevipedunculata</i>		(Page No. 342 , S.No. 7 ) (Liverworts Species)	Endangered (IUCN)	It is confined to Western Himalaya in Himachal Pradesh and Uttarakhand
55.	<i>Aitchisoniella himalayensis</i>		(Page No. 342 , S.No. 11 ) (Bryophytes)	Endangered (IUCN)	Endemic to the north-west Himalayas of India
56.	<i>Tsuga dumosa</i>	Tansen	(Page No. 40 , S.No 24 ) (Other herbs)	-	Indian Himalayan Region
57.	<i>Aconitum ferox</i>		(Page No. 126 , S.No 100 ) (Other herbs)	Plants of Kedarnath Wildlife Sanctuary, Western Himalaya; A Field Guide, Ishwari Datt Rai, Gajendra Singh and Gopal Singh Rawat. 2017	Endemic in Indian Himalayan Region
58.	<i>Cycas beddomei</i>		(Page No.265, S.No 17 Cycads)	Endangered (IUCN)	Endemic to Andhra Pradesh
59.	<i>Cycas annaikalensis</i>		Page No. 265 , S.No. 16 Cycads)	Critically Endangered (IUCN)	Endemic ti Kerla

APENDICES II

LIST OF THREATENED SPECIES

S.No.	Scientific Name	Local Name	Page No; Serial No	Conservation Status
1.	<i>Aquillaria agallocha</i>	Agar	(Page No. 78 , S.No.236 Other Trees)	Critically Endangered (IUCN)
2.	<i>Aquilaria malaccensis</i>	Agar Wood	(Page No. 89 , S.No.304 Other Trees)	Critically Endangered (IUCN)
3.	<i>Nardostachys jatamansi</i>	Jatamansi	(Page No. 98 , S.No.1 Aromatic Herbs)	Critically Endangered (IUCN & BSI); Threatened (Uttarakhand Biodiversity Board);
4.	<i>Lilium polyphyllum</i>	White Himalayan Lily	( Page No. 111 , S.No. 5 Other Herbs)	Critically Endangered (IUCN & BSI)
5.	<i>Saussurea costus</i>	Koot	(Page No. 114 , S.No. 23 Other Herbs)	Critically Endangered (IUCN & BSI)
6.	<i>Gentiana kurroo</i>	Trayman	(Page No. 114 , S.No. 24 Other Herbs)	Critically Endangered (IUCN & BSI); Threatened (Uttarakhand Biodiversity Board)
7.	<i>Chlorophytum borvivilianum</i>	Safed Musli	(Page No. 114 , S.No. 25 Other Herbs)	Critically Endangered (IUCN & BSI)
8.	<i>Beaucarnea recurvata</i>	Pony Tail Palm	( Page No. 250 , S.No. 2 Palm)	Critically Endangered (IUCN)
9.	<i>Hyophorbe lagenicaulis</i>	Bottle palm	( Page No. 250 , S.No. 5 Palm)	Critically Endangered (IUCN)
10.	<i>Dypsis leptocheilos</i>	Red neck palm	(Page No. 251 , S.No. 12 Palm)	Critically Endangered (IUCN)
11.	<i>Hyophorbe verschaffeltii</i>	Spindle Palm	(Page No. 252 , S.No. 15 Palm)	Critically Endangered (IUCN)
12.	<i>Gastrochilus calceolaris</i>	Shoe-Shaped Belly-Lip	Page No. 209 , S.No. 83 Orchids)	Critically Endangered (IUCN)
13.	<i>Cycas annaikalensis</i>		Page No. 265 , S.No. 16 Cycads)	Critically Endangered (IUCN)
14.	<i>Aconitum hetrophyllum</i>	Atees	(Page No. 110 , S.No. 1 Other Herbs)	Endangered (IUCN & BSI); Threatened (Uttarakhand Biodiversity Board)
15.	<i>Rauvolfia serpentina</i>	Sarp Gandha	(Page No. 138 , S.No. 21 Other Shrubs)	Endangered (IUCN)
16.	<i>Coffea arabica</i>	Coffee	(Page No. 147 , S.No. 72 Other shrubs)	Endangered (IUCN)
17.	<i>Angelica glauca</i>	Choru	(Page No. 100 , S.No. 16 Aromatic herbs)	Endangered (BSI)
18.	<i>Ficus andamanica</i>		(Page No. 14 , S.No. 31 Ficus)	Endangered (IUCN & BSI);
19.	<i>Ginkgo biloba</i>	Maiden Hair tree	(Page No. 39 , S.No. 21 Other trees)	Endangered (IUCN)
20.	<i>Pittosporium eriocarpum</i>	Tumri	(Page No. 41 , S.No. 34 Other trees)	Endangered (IUCN & BSI);
21.	<i>Cedrus atlantica</i>		(Page No. 61 , S.No. 137 Other trees)	Endangered (IUCN)
22.	<i>Hopea wightiana</i>	Pav	(Page No. 82 , S.No. 262 Other trees)	Endangered (IUCN)
23.	<i>Dipterocarpus retusus</i>	Hollong	(Page No. 76 , S.No. 222 Other trees)	Endangered (IUCN & BSI);
24.	<i>Caesalpinia bonduc</i>	Latakaranj	(Page No. 144 , S.No. 59 Other shrubs)	Endangered (IUCN)
25.	<i>Picrorhiza kurrooa</i>	Kutaki	(Page No. 111 , S.No. 9 Other herbs)	Endangered (IUCN)
26.	<i>Trillium govanianum</i>	Nagchatri	(Page No. 113 , S.No. 16 Other herbs)	Endangered (IUCN)
27.	<i>Aerides odorata</i>		(Page No. 202 , S.No. 31 Orchids)	Endangered (IUCN)

28.	<i>Cypripedium himalaicum</i>	Himalayan Venus	(Page No. 209 , S.No. 84 Orchids)	Endangered (IUCN & BSI); Rare (ENVIS & Indian Biodiversity Portal)
29.	<i>Pritchardia remota</i>	Pritchardia Palm	(Page No. 254 , S.No. 26 Palm)	Endangered (IUCN)
30.	<i>Latania verschaffeltii</i>		(Page No. 256 , S.No 46 Palm)	Endangered (IUCN)
31.	<i>Zamia furfuracea</i>	Cardboard Palm	(Page No. 263 , S.No. 1 Cycads)	Endangered (IUCN)
32.	<i>Cycas circinalis</i>	Queen Sago Palm	(Page No. 263 , S.No. 4 Cycads)	Endangered (IUCN & BSI)
33.	<i>Zamia fischeri</i>		(Page No. 264 , S.No. 6 Cycads)	Endangered (IUCN)
34.	<i>Echinocactus grusonii</i>	Golden barrel cactus	(Page No. 277 , S.No 78 Cactus)	Endangered (IUCN)
35.	<i>Zamia integrifolia</i>		(Page No. 264 , S.No 14 Cycad)	Near Threatened (IUCN)
36.	<i>Stephensiella brevipedunculata</i>		(Page No. 342 , S.No 7 Bryophytes)	Endangered (IUCN)
37.	<i>Aitchisoniella himalayensis</i>		(Page No. 342 , S.No 11 Bryophytes)	Endangered (IUCN)
38.	<i>Cycas beddomei</i>		(Page No. 265 , S.No 17 Cycad)	Endangered (IUCN)
39.	<i>Fritillaria roylei</i>	Kakoli	(Page No. 128 , S.No 111 Other herbs)	Endangered (IUCN)
40.	<i>Saraca asoca</i>	Seeta ashok	(Page No. 55 , S.No. 108 other trees)	Vulnerable (IUCN & BSI)
41.	<i>Ulmus wallichiana</i>	Emroyi	(Page No. 47 , S.No. 61 other trees)	Vulnerable (IUCN & BSI)
42.	<i>Pterocarpus marsupium</i>	Bijasal	(Page No. 63 , S.No. 150 other trees)	Vulnerable (IUCN)
43.	<i>Jacranda mimosifolia</i>	Jacranda	(Page No. 54 , S.No. 101 other trees)	Vulnerable (IUCN)
44.	<i>Santalum album</i>	Chandan	(Page No. 59 , S.No. 129 other trees)	Vulnerable (IUCN & BSI)
45.	<i>Dalbergia latifolia</i>	Kala Shisam	(Page No. 68 , S.No. 179 other trees)	Vulnerable (IUCN & BSI)
46.	<i>Vateria indica</i>	White Dammar	(Page No. 81 , S.No. 260 other trees)	Vulnerable (IUCN) & Critically Endangered (Indian Biodiversity Portal)
47.	<i>Malaxis muscifera</i>	Rishbhak	(Page No. 200 , S.No. 15 Orchid species)	Vulnerable (IUCN & BSI)
48.	<i>Aconitum balfouri</i>	Meetha	(Page No. 110 , S.No. 2 other Herbs)	Vulnerable (IUCN), Threatened (Uttarakhand biodiversity Board)
49.	<i>Ravenea rivularis</i>	Majestic Palm	(Page No. 251 , S.No. 6 Palm)	Vulnerable (IUCN)
50.	<i>Dypsis decaryi</i>	Triangle Palm	(Page No. 260 , S.No. 75 Palm)	Vulnerable (IUCN)
51.	<i>Myristica malabarica</i>	Malabar Nutmeg	(Page No. 89 , S.No. 308 other trees)	Vulnerable (IUCN)
52.	<i>Normanbya normanbyi</i>	Black palm	(Page No. 262 , S.No. 86 Palm)	Vulnerable (IUCN)
53.	<i>Cycas pectinata</i>		(Page No. 265 , S.No. 20 Cycad)	Vulnerable (IUCN)
54.	<i>Pinus greggii</i>		(Page No. 29 , S.No. 7 Pine)	Near Threatened (IUCN)
55.	<i>Pinus gerardiana</i>		(Page No. 31 , S.No. 22 Pine)	Near Threatened (IUCN)
56.	<i>Cryptomeria japonica</i>		(Page No. 40 , S.No. 27 Other tree species)	Near Threatened (IUCN)
57.	<i>Platyclusus orientalis</i>	Morpankhi	(Page No. 46 , S.No. 58 Other tree species)	Near Threatened (IUCN)
58.	<i>Pterocarpus santalinus</i>	Raktchandan	(Page No. 67 , S.No. 172 Other tree species)	Near Threatened (IUCN)

59.	<i>Swietenia mahagoni</i>	American mahogany	(Page No. 72 , S.No. 200 Other trees)	Near Threatened (IUCN)
60.	<i>Abies spectabilis</i>		(Page No. 76 , S.No. 223 Other tree species)	Near Threatened (IUCN)
61.	<i>Dypsis lutescens</i>	Golden cane palm	(Page No. 252 , S.No. 13 Palm)	Near Threatened (IUCN)
62.	<i>Washingtonia robusta</i>	Mexican fan Palm	(Page No. 252 , S.No. 18 Palm)	Near Threatened( IUCN)
63.	<i>Adonidia merrillii</i>		(Page No. 254 , S.No. 31 Palm)	Near Threatened (IUCN)
64.	<i>Washingtonia filifera</i>	Desert fan palm	(Page No. 258, S.No. 62 Palm)	Near Threatened (IUCN)
65.	<i>Phoenix rupicola</i>	Cliff Date Palm	(Page No. 256 , S.No. 45 Palm)	Near Threatened (IUCN)
66.	<i>Zamia pumila</i>	Coontie palm	(Page No. 263 , S.No. 2 Cyacd)	Near Threatened (IUCN)
67.	<i>Pinanga coronata</i>		(Page No. 260 , S.No. 74 Palm)	Near Threatened (IUCN)
68.	<i>Trachycarpus takil</i>	Kumaon fan palm	(Page No. 258 , S.No. 56 Palm)	Threatened (Uttarakhand biodiversity Board); Rare (ENVIS)
69.	<i>Allium stracheyi</i>	Faran	(Page No. 98 , S.No. 3 Aromatic herbs)	Vulnerable (ENVIS)
70.	<i>Acer caesium</i>	Kanchula	(Page No. 40 , S.No. 25 Other trees)	Vulnerable (ENVIS)
71.	<i>Rheum moorcroftianum</i>	Dolu	(Page No. 112 , S.No. 10 Other herbs)	Vulnerable (ENVIS)
72.	<i>Acer oblongum</i>	Pharbanj	(Page No. 36 , S.No. 4 Other tree species)	Endangered (ENVIS)
73.	<i>Meizotropis pellita</i>	Patwa	(Page No. 141, S.No. 39 Other Shrub species)	Threatened (Uttarakhand biodiversity Board)
74.	<i>Indopiptadenia oudhensis</i>	Gainti	(Page No. 48, S.No. 67 Other tree species)	Threatened (Uttarakhand biodiversity Board)
75.	<i>Schrebera swietenioides</i>	Van palas	(Page No. 69 , S.No. 184 Other tree species)	Threatened (Uttarakhand biodiversity Board)
76.	<i>Eremostachys superba</i>	Golden Himalayan Spike	(Page No. 117 , S.No. 40 Other herbs)	Threatened (Uttarakhand biodiversity Board)
77.	<i>Cyathea spinolosa</i>	Tree fern	(Page No. 215 , S.No. 1 Fern species)	Threatened (Uttarakhand biodiversity Board)
78.	<i>Phaius tankervilleae</i>	Red cane orchid	(Page No. 203 , S.No. 38 Orchid species)	Threatened (Uttarakhand biodiversity Board)
79.	<i>Pecteilis gigantean</i>	Butterfly Orchid	(Page No. 207 , S.No. 66 Orchid species)	Threatened (Uttarakhand biodiversity Board)
80.	<i>Diplomeris hirsuta</i>	Snow Orchid	(Page No. 207 , S.No. 68 Orchid species)	Threatened (Uttarakhand biodiversity Board) & Vulnerable (Indian Biodiversity Portal)
81.	<i>Aquilegia nivalis</i>		(Page No. 243, S.No. 13 Alpine flower)	Rare (IUCN)
82.	<i>Cymbopogon citrates</i>	Lemon Grass	(Page No. 186 , S.No. 18 Grass species)	Rare ENVIS
83.	<i>Ficus cupulata</i>		(Page No. 18 , S.No. 53 Ficus Species)	Rare ENVIS
84.	<i>Alangium lamarckii</i>	Ankola	(Page No. 62 , S.No. 148 Other Trees)	Rare ENVIS
85.	<i>Cypripedium cordigerum</i>	Lady Slipper Orchid	(Page No. 205 , S.No. 56 Orchid Species)	Rare (Indian Biodiversity Portal)

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# Threatened species of Uttarakhand

(as per Uttarakhand State Biodiversity Board)



*Aconitum balfouri*  
( Mitha Vish)



*Aconitum heterophyllum*  
(Atis)



*Aconitum violaceum*  
(Chota atis)



*Schrebera swietenioides*  
(Banpalas)



*Trachycarpus takil*  
(Takil palm)



*Diplomeris hirsuta*  
(Snow orchid)



*Eremostachys superba*  
(Golden Himalayan Spike)



*Dactylorhiza hatagirea*  
(Salampanja)



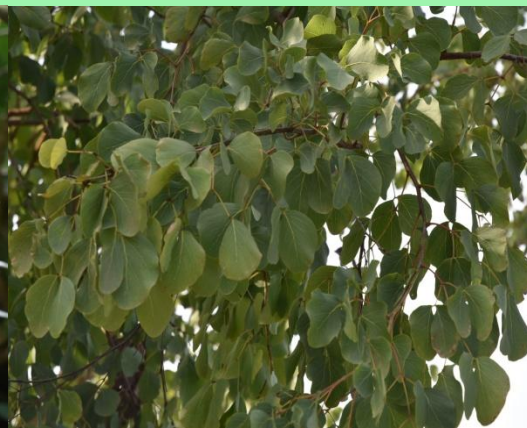
*Nardostachys grandiflora*  
(Jatamansi)



*Gentiana kurroo*  
(Trayman)



*Phaius tankervilleae*  
(Red Crane Orchid)



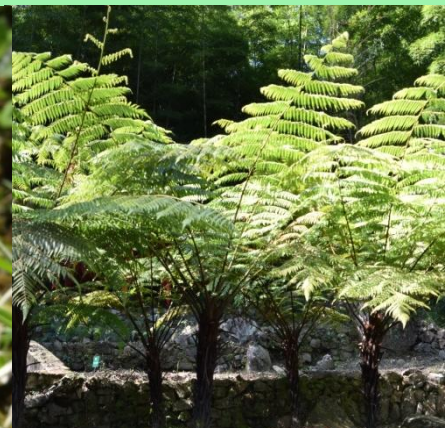
*Indopiptadenia oudhensis*  
(Gainti)



*Pecteilis gigantean*  
(Butterfly orchid)



*Pinguicula alpina*  
(Alpine butterwort)



*Cyathea spinulosa*  
(Tree fern)



*Turpenia nepalensis*  
(Thali)