

CHAPTER-3

BIODIVERSITY

2016-2021



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Biodiversity is defined as the variety and variability among the living organism and the ecological complexes in which they occur. It refers to the variabilities among species of plant, animals and microorganisms; ecosystem; ecosystem including aerial, marine and other aquatic systems and ecological complexes of which they are part. It can be said that biodiversity is the sum of all the genes, varieties, species, populations in the different ecosystems and their relative abundance. Scientists are aware of the immense potentials of various life forms existing on the earth. Biological diversity provides us nourishment, clothing, housing, fuel, and medicine and meets our several other requirements. Therefore the knowledge of biodiversity is of immense utility in planning sustainable livelihood and conserving natural resources.



Fig-1: Mother Nature regulations and benefits

Botanic Garden of the university

The Botanic Garden of the University (Botany department) is a treasure of rare, native and exotic plants as an Ex-situ conservation management centre. It is one of the country's prestigious Botanic gardens, which is also a member of the Botanic Garden Conservation International, Kew, United Kingdom. Prof. Y.D Tyagi established the Botanic Garden; after that, it was maintained by Dr. R.N. Dakwale, Prof. T.R. Sahu, and Prof. Deepak Vyas is still maintaining it. The Botanic Garden is a centre for environmental awareness to school children, college students and the general public. Now it has become an attraction of the University, and people from different walks of life regularly visit the Garden. The Garden nurtures the needs of the different colleges of Sagar and nearby areas for plant materials.

The Botanical Garden has the species belonging to different Angiospermic plants, gymnosperms, Pteridophyte and bryophyte, Mushroom; apart from this, the department of botany has Arboretum, which is a miniature forest for the study of the students. The Garden has a Poly house, glasshouse, greenhouse, a citrus orchard, medicinal plant small pond for aquatic plants. The list of plants is given below in tabular form.

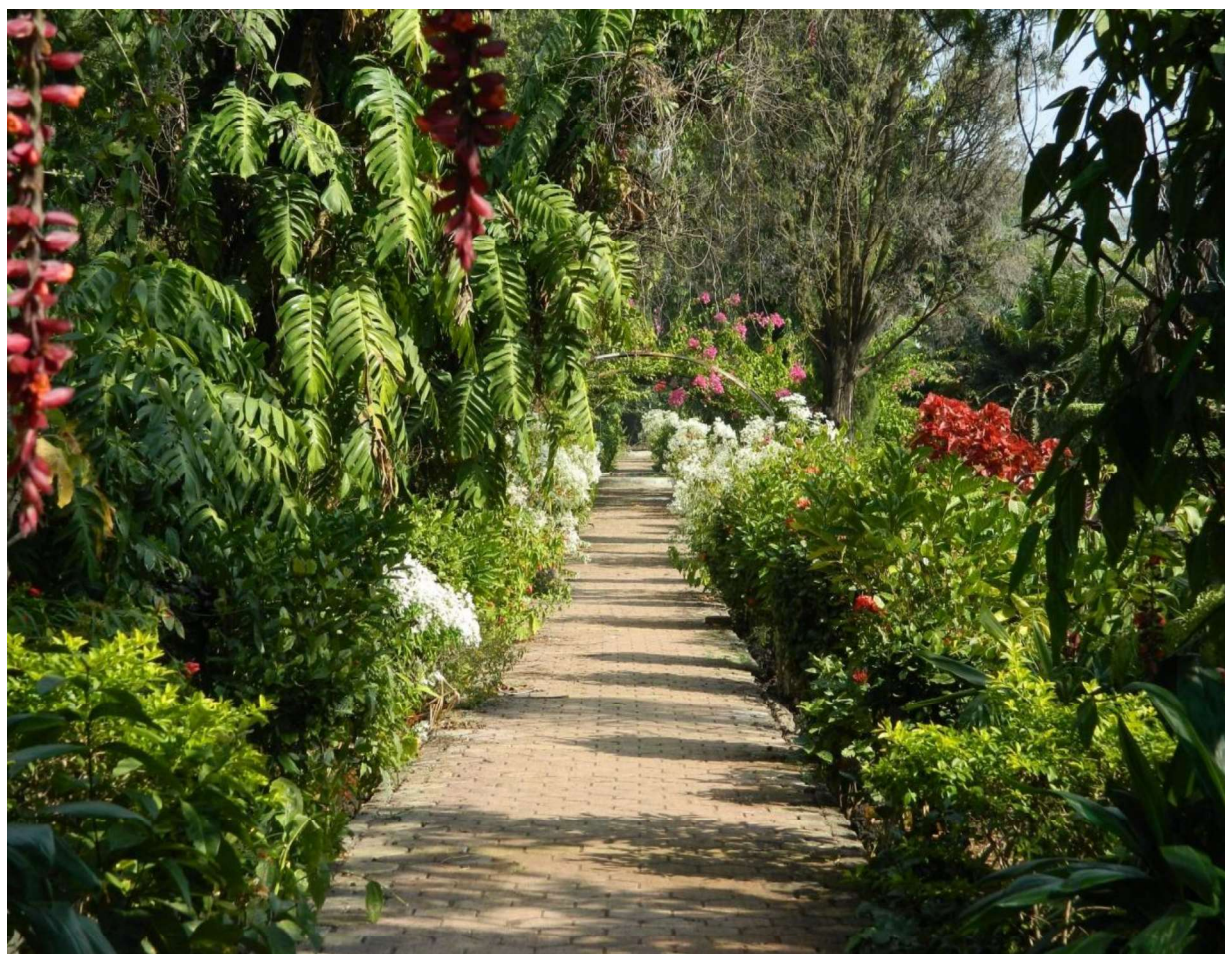


Fig-2: University Botanical Garaden



History of gardening in India

The history of systematic gardening in India is as old as civilization of Indus of Harappan which existed between 2500 B.C and 1750 B.C. During the period, people were living in well-planned dwellings. Harappan pots were generally decorated with the design of trees. In every village, trees including *Ficus religiosa* (pipal) and *F. bengalensis* (banyan) were planted for worship as well as for shade. Aryans came to India in 1600 B.C. They were literary people and brought with them the four Vedas viz., Rig Veda, Artharva Veda, Yuzur Veda and Sam Veda and the Puranas. They appreciated the beauty of flowering plants, lakes, mountains, forests, etc., and named their children after flowers like Kamal, Champa, Bela, Chameli, Rukmani, etc., detailed account of the status of gardening at that time has been presented in Ramayana written by Valmiki. Ayodhya city was described as having wide streets, large houses, richly decorated temples and gardens. These gardens were planted with fruit trees and flowering plants and had lakes full of lotus (*Nelumbo* sp.) and different kinds of birds. During exile, lord Rama and Sita are believed to have observed a number of trees and were fascinated by beautiful flowers. One such tree was Ashoka (*Saraca indica*). Another epic ‘Mahabharat’ written by saint Vyasa also mentions about gardens. During the Mahabharat era, pleasure gardens were planted with flowering plants. The famous tree of this era was Kadamba (*Anthocephalus cadamba*), which is associated with lord Krishna. The great poet Kalidas has described the numerous flowering plants of that era in a number of his books. In ‘Kumar Sambhav’ trees like Ashoka, Kalpvriksha, Shirish flower, *Butea monosperma*, parijatham (*Nyctanthes arbotristis*), *Mimusops elengi*, lotus and lilies have been mentioned. The association of different trees with the life of Lord Buddha is well known. Buddha was born in 563 B.C. His birth is believed to have taken place under the Asoka tree (*Saraca indica*). Further, Buddha attained his enlightenment under a *Pipal* tree, spread his new teachings under shady banyan and mango trees and breathed his last in a Sal (*Shorea robusta*) grove.

The basic principle of Gardening

Landscaping is an aesthetic branch of Horticulture, which deals with the planting of ornamental plants to create a picturesque effect. Landscape gardening can also be defined as beautifying a tract of land having a house or other object of interest. It creates a natural scene by planting lawns, trees, shrubs, flowering annuals, climbers, creepers, etc. Further, landscape gardening is both an art and science of the establishment of ground so that it gives an effect of a natural landscape. It can also be defined as “improving of total living environment for the people”. A gardener should follow certain basic gardening principles to achieve a garden that is pleasing to the senses and provides pleasant outdoor living space. These principles are discussed below:



Balance

The balance in landscape design is visual equilibrium of different garden elements. Balance can be created in a garden either formal or informal by grouping the components, structures and plants equally on both sides of the imaginary central axis. It is a striking feature in a formal garden. The exact duplication of what is on right on the left imposes a balance. The balance should be colourwise, texture wise and shape wise. Trees as an avenue on one side will not make a balance. Care should be bestowed to create balance in colour and texture.

Proportion

Proportion refers to the share of the different parts or components of the whole. It is the relation of the component with others in magnitude. In a landscape garden, the space and area provided for a lawn, paths, borders, trees, buildings etc., should be in the right proportion and not equal in proportion. Proportion helps in space organization. The disproportionate occupation of any one component may distract the eye and attention.

Unity

Though diverse structures, plants and features are used to create a landscape, there should be unity among each component and all the components with the main building. Instead of the individual beauty of a component, the overall beauty should be focused to achieve unity in diversity. Further, a designer should integrate the aesthetic principles of balance, rhythm, proportion and harmony to give unity to the composition. If one's mind is conditioned to unite or mingle with other persons freely, he will be accustomed to interacting without reaction. Such interaction without reaction is the quality imposed by the 'unity' concept of a garden.

Perspective

Any object situated at a distance will look small compared to the same size kept close to the vision. E.g. the Railroad converges at a distance. This visual phenomenon of shrinkage in size and converging of lines is termed perspective. The garden objects can be positioned either in the foreground or background to create pleasing visual illusions.

Vista

It is the three-dimensional confined view of a terminal object along the eye line at the focal point. E.g. Taj tomb as viewed from its opposite.

Prospect

Prospect is the view of scenery, natural or man made, through an opening such as a window or a gap in the foliage of trees. It is the 'camera view' of any scenery. Such prospects can be created in landscape gardening by adopting suitable proportions and unity.

Restraint

Overuse of any component, including grouping of plants in a particular location, masks the scenic beauty. If all the natural or artificial features are kept within bounds or used with restraint, the best results can be achieved.



Rhythm

Rhythm is measured as cyclic repetition of an object, effect and event. In a garden, rhythm can be infused through cleverly repeated colours and shapes, topiaries and hedges etc. In Mughal gardens, the fountains and cascades have been repetitively provided to create rhythm. Sometimes the rhythm is created through the action of lights under the water. Boredom clutches the mind predisposing it to become a devil's workshop. Rhythm in thought waves elevates the mind from the tentacles of boredom.

Harmony

Harmony is the pleasing effect obtained due to the appropriate arrangement and collation of the various garden features. It is the overall effect of various features styles, colours and structures in the total landscape. Every part of the landscape should synchronize into the other and all the components into the whole. No individual component should project itself beyond its expected limit.

Movement or Mobility

The concept of mobility is vital to the garden as breath to humans. Mobility can be introduced in the garden by the magnificent sway of tall trees, birds in the sky, butterflies circling over flowers, dispersal of clouds in the sky, surging water in fountains, the gentle curvature of roads, trunks, branches of trees, etc. If all the components are stiff, stony and static, it will harden the attitude of the person, and the aggressive tendency is triggered from within. Mobility in a garden will loosen the hardened attitude of humans and relax them from the tentacles of anger and revenge.

Surprise

All components of a garden should not be exposed to the vision at one stroke from one point. If exposed, there will not be any curiosity in a person to walk along and move within to explore further. One component should be gracefully hidden from the other either by the gentle turn of the road, paths or screening through shrubbery, hedges or pergolas.

Skyline

Garden meets the sky in its vertical dimension. Planning a garden should include planning for a skyline also. A peak of a mountain, gigantic trees, an old monumental building, temple towers *etc.*, if available, naturally can be woven into the background design to add beauty to the skyline of trees.

Scale

Scale is a relative dimension. The height and spread of trees and shrubs and the spread of the water garden are determined by adopting a scale. To make it clear, it may be noted that a small reflecting pool underneath a large tree will be dominated by the tree and render the pool ineffective, owing to the difference in their dimensions. To get the right picture of a tree beside a pool we should adopt a ratio between the size of the tree and pool as is obtained in nature. Appropriate adoption of scales and proportionate measurements are the success of imitative naturalistic garden art.

Space

The aim of every garden design should be such that the garden should appear large than its actual size. One way of achieving this is to keep vast open spaces, preferably under the lawn and restrict the plantings in the periphery, usually avoiding any planting in the centre. However, if any planting has to be done in the centre, the choice should be a tree that branches at a higher level on the trunk (or the lower branches are removed) and not a bushy shrub. Such planting will not obstruct the view or make the garden appear smaller than its size.

Table-2: Plant Diversity of Botanical Garden

Sl	Family	Botanical Name	Local Name
1.	Acanthaceae	<i>Barleria cristata</i> Linn	Vajradanti
		<i>Barleria prionitis</i> Linn.	Katsariya
		<i>Adhatoda vasica</i> Nees.	Adusa
		<i>Andrographis paniculata</i> Burm.	Chirayta
		<i>Hygrophila auriculata</i> Schum.	Talmakhana
		<i>Justicia procumbans</i> L	
		<i>Rungia parviflora</i>	
2.	Allioacea	<i>Allium sepa</i> L	Pyaz
		<i>Allium sativum</i> L	Lahsun
3.	Amaranthaceae	<i>Celosia argentea</i> L.	Morshikha
		<i>Achyranthes aspera</i> L.	Apmarga
		<i>Alternanthera pungens</i> Kunth.	
		<i>Gomphrena celosioides</i> Mart. Beitr.	Gorakhmundi
		<i>Amaranthus spinosa</i> L	Katailli chauli
		<i>Amaranthus iricola</i> L	Lalmassa
4	Anacardiaceae	<i>Buchanania lanzan</i> Spreng.	Achar
		<i>Lannea coromandelica</i> Merr.	Gunj
		<i>Mengifera indica</i> L.	Aam
		<i>Anacardium occidentale</i> L	Kosa
		<i>Semicarpus anacardium</i> L	Bhilwa



5.	Annonaceae	<i>Annona squamosa L.</i>	Sitaphal
		<i>Annona relicolala L</i>	Ramphal
		<i>Polyallthia longifolia L</i>	Ashok
		<i>Polyallthia pendula L</i>	Ashok
6.	Amoacea	<i>Centella</i>	Brahmi
		<i>Coriender sativum L</i>	Dhaniya
		<i>Curmium cymium L</i>	Jira
		<i>Daucas carrota</i>	Gagar
		<i>Ferula asafoetida L</i>	Hing
		<i>Foenicum vulgare L</i>	Souff
		<i>Trychyspermum ammi L</i>	Ajwain
		<i>Hydrocotyl asiateria L</i>	
7.	Apocynaceae	<i>Carissa spinarum L.</i>	Karonda
		<i>Catharanthus roseus L.</i>	Sadabahar
		<i>Ichnocarpus frutescens (L.) R.Br.</i>	Dhimarbel
		<i>Wrightia tinctoria R.Br.</i>	Dudhi
		<i>Rauwolfia tetraphylla L.</i>	Sarpgandha
		<i>Alstonia schdaris L</i>	Saptaparna
		<i>Holarrhina pubescens wall</i>	Kutas
		<i>Nerium oleander L</i>	Kaner
		<i>Thevetia peruviana</i>	Pila kaner
		<i>Carrissa opoca staplex</i>	Karonda
8.	Asclepiadaceae	<i>Calotropis gigantea (Linn.) R.Br.</i>	Akaua
		<i>C. procera (Ait.) R.Br.</i>	Safed akaua
		<i>Pergularia daemia L.</i>	Dudhibel
		<i>Gymnema sylvestris</i>	Gudmar



		<i>Leptadenia reticulat</i>	Jivanti
		<i>Tylophora indica</i>	
9.	Asteraceae	<i>Xanthium strumarium L.</i>	Gorkhuru
		<i>Echinops echinatus Roxb.</i>	Utakanta
		<i>Elephantopus scaber L.</i>	Hathipawn
		<i>Tridax procumbens L.</i>	Kotbutton
		<i>Eclipta alba L.</i>	Ghamra
		<i>Spilanthes acmella auct. Non. (L.)</i>	Akarkara
		<i>Ageratum conyzoides L.</i>	Bhakumbhar
		<i>Dendratema indica L</i>	Guldaudi
		<i>Emilia sanchifolia</i>	
		<i>Launea procumbens Rox</i>	
		<i>Sphaeranthus indicus L</i>	Gorakhmundi
		<i>Toget ereda L</i>	Genda
		<i>Vernonia cinerea L</i>	Sahadei
		<i>Wedelia calendulacea</i>	
10.	Averrhoaceae	<i>Averrhoa caram</i>	Kamrak
11.	Araceae	<i>Acorus calamus L</i>	
		<i>Amorphophallus bulbifer</i>	Surankand
12.	Aracaceae	<i>Areca catechu L</i>	Supari
		<i>Calamus rotung L</i>	Canepalm
		<i>Caryota urens L</i>	fishtellpalm
		<i>Cocus nucifera L</i>	Narial
		<i>Phoenix doetylfera L</i>	Khajur
13.	Aristolochiaceae	<i>Aristolochia indica L.</i>	Karigurison
14.	Bolanitaceae	<i>Balanite oegyptica L</i>	Hingot

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15.	Bombacaceae	<i>Bombax ceiba L.</i>	Semal
		<i>Adansonia digitata L</i>	Kalpvrkshs
16.	Berberiloeceae	<i>Berberis aristola</i>	Daruhaldi
17.	Betuloeceae	<i>Betula alnoides</i>	Bhojpatra
18.	Bignoniaceae	<i>Bignonia sp.</i>	
		<i>Dolichandrone falcata</i> (Fenzl.) Seem.	Medsingh
		<i>Millingtonia hortensis</i> Linn. f	Akashneem
19.	Bixaceae	<i>Bixa orellana</i>	Sindoor
20.	Boraginoceae	<i>Trichodeshma indicum L</i>	
		<i>Cordia dichotoma</i> Forst. f podr.	Lasoora
21.	Brassicaceae	<i>Brassica campetris L</i>	Pili sarson
		<i>Raphanus salivum L</i>	Mooli
22.	Burseraceae	<i>Baswellia serrata Roxb.</i>	Salai
		<i>Garuga pinnata Roxb.</i>	Kekad
		<i>Commiphora mukul</i> (Hook. ex Stocks)	Gugal
23.	Cactaceae	<i>Opuntia dillenii</i> (Ker-Gawl) Benson.	Nagfani
24.	Caesalpiniaceae	<i>Bauhinia vahlii W. & A.</i>	Mahul
		<i>Bauhinia malabarica Roxb.</i>	Amta
		<i>Bauhinia racemosa Lam.</i>	Asta
		<i>Bauhinia variegata L.</i>	Safed kachnar
		<i>Bauhinia purpurea L.</i>	Keolar
		<i>Caesalpinia bonducella L.</i>	Gatan
		<i>Caesalpinia decapetala</i> (Roth.) Aliston.	Gatan
		<i>Cassia fistula L.</i>	Amaltas
		<i>Cassia absus L.</i>	Chota puwanr
		<i>Cassia tora L.</i>	Puwanr

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		<i>Cassia occidentalis L.</i>	Banchironta
		<i>Cassia alata L.</i>	
		<i>Hardwickia pinnata Roxb.</i>	Anjan
		<i>Delonix regia (Bajes.) Raf.</i>	Gulmohar
		<i>Tamarindus Indica L.</i>	Imli
		<i>Saraca aroca de willd</i>	Sita ashok
25.	Cannabaceae	<i>Cannabis sativa L</i>	Bhang
26.	Caryophyllaceae	<i>Vaccaria pyramidata Medic.</i>	Sabuni
27.	Caricaceae	<i>Carica papaya L</i>	Papaya
28.	Celastraceae	<i>Celastrus paniculata willd</i>	Malkagni
		<i>Elaeodendron glaucum (Vahl.)</i>	Jamrasi
		<i>Gymnosporia montana Roth.</i>	Baikal
29..	Ceratophyllaceae	<i>Ceratophyllum domescum L</i>	
30.	Chenopodiaceae	<i>Betebulgaris L</i>	Chukunder
		<i>Chenopodium album</i>	Bathua
		<i>Spinocia oleroccea L</i>	Palak
31.	Capparadaceae	<i>Cleome viscosa L.</i>	Pili hulul
		<i>Capparis zeylanica L.</i>	Hartar
		<i>Crataeva nurvala (Buch-Ham.)</i>	Berna
		<i>Cleome gynandra L.</i>	Safed hulul
32.	Cochospermocae	<i>Cochlospermum reliosum L</i>	Pili kapas
33.	Cochlospermaceae	<i>Cochlospermum religiosum L.</i>	Galgal
34.	Combretaceae	<i>Anogeissus latifolia Roxb.</i>	Dhou
		<i>Anogeissus pendula Edgew.</i>	Kardhai
		<i>Combretum decandrum Roxb.</i>	Piwarbel
		<i>Terminalia arjuna W. & A.</i>	Koha



		<i>Terminalia tomentosa W. & A.</i>	Saj
		<i>Terminalia bellerica Roxb.</i>	Bahera
		<i>Terminalia chebula</i>	Harr
		<i>Terminalia caltopa</i>	Badam
		<i>Terminalia arjuna</i>	Arjun
35.	Cannaceae	<i>Canna indica L.</i>	Keli
36.	Costaceae	<i>Costus speciosus (Koenig)</i>	Keokand
37.	Convolvulaceae	<i>Evolvulus alsinoides L.</i>	Sankhpuspi
		<i>Ipomoea acuatica Forssk.</i>	Nari
		<i>Ipomoea alba</i>	
		<i>Ipomoea aqalica L</i>	
		<i>Ipomoea batotan L</i>	Shakarkand
		<i>Ipomoea mauritiann jock</i>	
		<i>Ipomoea sepioria Roxb</i>	Zaxmoner
		<i>Cuscuta reflexa Roxb.</i>	Amarbel
38.	Cucurbitaceae	<i>Benincasa hispida Thumb.</i>	Safed kumhra
		<i>Momordica dioica Roxb. ex willd.</i>	Parora
		<i>Trichosanthes cucumerina L.</i>	Janglichichinda
		<i>Trichosanthes anguina L.</i>	Chichinga
		<i>Bryonopsis laciniosa L.</i>	Shivlingi
39.	Crassulaceae	<i>Bryophyllum pinnatum Kurz.</i>	Patherchata
40.	Cyperaceae	<i>Cyperus rotundus (Kunth.)</i>	Nagarmotha
41.	Dilleniaceae	<i>Dillenia pentagyna Roxb.</i>	Aggi
42.	Dioscoreaceae	<i>Dioscorea bulbifera L.</i>	Baichandi
43.	Depterocarpiaceae	<i>Shorea robusta</i>	Sal
44.	Ebenaceae	<i>Diospyros montana (auct.) non Roxb.</i>	Bistendu



		<i>Diospyros melanoxylon</i> Roxb.	Tendu
45.	Euphorbiaceae	<i>Euphorbia hirta</i> L.	Dudhi
		<i>Euphorbia neriifolia</i> L.	Sehund.
		<i>Euphorbia thymifolia</i> L.	Dhakti dudhi
		<i>Euphorbia geniculata</i> L.	Badi dudhi
		<i>Bridelia retusa</i> (L.) Spreng.	Kasai
		<i>Jatropha curcas</i> L.	Ratanjot
		<i>Ricinus communis</i> L.	Arandi
		<i>Mallotus philippensis</i> (Lam.) Arg.	Rori
		<i>Acalypha indica</i> L.	Haritmanjari
		<i>Baliospermum axillare</i> Blume.	Hansiadafar
		<i>Phyllanthus simplex</i> Retz.	Bhuiamla
		<i>Phyllanthus urinaria</i> L.	Jaramiyan
		<i>Phyllanthus niruri</i> L.	Jaramala
		<i>Putranjiva roxburghii</i> L.	Putranjiva
		<i>Fluggea macrocarpa</i> Blume.	Dengla
		<i>Emblica officinalis</i> Gaerth.	Amla
46.	Fumaraceae	<i>Fumaria parviflora</i> Lam.	Pit papra
47.	Fabaceae	<i>Ougeinia dalbergioides</i> Benth.	Tinsa
		<i>Abrus precatorius</i> L.	Gumchi
		<i>Alysicarpus monilifer</i> (L.) DC Prodr.	
		<i>Butea monosperma</i> Lamk.	Palash
		<i>Clitoria ternatea</i> L.	Aparajita
		<i>Crotolaria juncea</i> L.	San
		<i>Dalbergia sissoo</i> Roxb.	Sheshum
		<i>Dalbergia latifolia</i> Roxb.	Kalasheshum



		<i>Dalbergia peniculata</i> Roxb.	Dhobin
		<i>Erythrina suberosa</i> Roxb.	Haduwa
		<i>Heylandia latebrosa</i> DC	
		<i>Indigofera linnaei</i> Ali.	Neel
		<i>Mucuna pruriens</i> L.	Kewanch
		<i>Pongamia pinnata</i> L. Piers.	Karanj
		<i>Pterocarpus marsupium</i> Roxb.	Bija sal
		<i>Tephrosia purpurea</i> L.	Jangli neel
		<i>Psoralea corylifolia</i> L.	Bawchi
		<i>Pueraria tuberosa</i> L.	Bidarikand
48.	Flacourtiaceae	<i>Casearia tomentosa</i> Roxb.	Chilla
		<i>Flacourtia indica</i> (Burm.f.) Merr,	Kanker
49.	Gentaceae	<i>Enicostema littorae</i> auct. non Blum.	Naha
		<i>Swertia chirayata</i>	Chirayta
50.	Hypoxidaceae (Amaryldaceae)	<i>Curculigo orchioides</i> Gaertn.	Kalimusli
51.	Lamiaceae	<i>Anisomeles indica</i> Linn.	Gandhtulsi
		<i>Colebrookea oppositifolia</i> Sm.	Binda
		<i>Pogostemon benghalense</i> (Burm. f) Kuntze.	Pangla
		<i>Leucas aspera</i> (Willd.)	Dronpuspi
		<i>Ocimum sanctum</i> L.	Tulsi
		<i>O. gratissimum</i> L.	Vantulsi
		<i>O. basilicum</i> L.	Maruadona
52.	Lauraceae	<i>Litsea chinensis</i> L.	Mainda lakdi
		<i>Cinnamomum tamala</i> L	Tejpatra
		<i>Cinnamomum verum</i>	Dalchini



53.	Liliaceae	<i>Aloe barbadensis</i> Mill.	Guwarpatha
		<i>Gloriosa superba</i> L.	Kalihari
		<i>Asparagus racemosus</i> Willd	Satavar
		<i>Urginea indica</i> Roxb.	Jangli piyaz
		<i>Chlorophytum tuberosum</i> Roxb.	Sukh sewaniya
		<i>C. borivilianum</i> Santapu & Fernandes.	Safed musli
		<i>Asphodelus tenuifolius</i> Linn.	Piyazi
54.	Loranthaceae	<i>Dendrophthoe falcata</i> Martt.	Jangliimli
55.	Lecythidaceae	<i>Careya arborea</i> Roxb.	Kumhi
56.	Lythraceae	<i>Lagerstroemia parviflora</i> Roxb.	Kalaseja
		<i>Lawsonia inermis</i> L.	Mehndi
		<i>Woodfordia fruticosa</i> L.	Dhawai
57.	Malvaceae	<i>Abelmoschus moschatus</i> Medic.	Vanbhindi
		<i>Abutilon indicum</i> (L.) Sweet.	Kanghi
		<i>Hibiscus rosa-sinensis</i> L.	Gudhal
		<i>Sida cordifolia</i> L.	Kungyi
		<i>Sida acuta</i> Burm.	Bariela
		<i>Sida rhombifolia</i> L.	Swet bariela
		<i>Sida spinosa</i> L.	Gulsakri
		<i>Thespesia populnea</i> Soland.	Banpipal
		<i>Th. lampus</i> Dalz. & Gibs.	Bankapas
		<i>Kydia calycina</i> Roxb.	Barga
		<i>Malvestrum coromandelianum</i> Gracke.	
58.	Meliaceae	<i>Azadirachta india</i> A. Juss	Neem
		<i>Melia azadirach</i> L.	Bakain
		<i>Chloroxylon swietenia</i> DC.	Bhira



59.	Menispermaceae	<i>Cissampelos pareira L.</i>	Akaundi
		<i>Tinospora cordifolia Willd.</i>	Giloe
		<i>Cocculus hirsutus L.</i>	Jaljamini
60.	Mimosaceae	<i>Acacia leucophloea Roxb.</i>	Babool
		<i>Acacia nilotica L.</i>	Bamoor
		<i>Acacia catechu L.</i>	Khair
		<i>Albizia lebbeck L.</i>	Kala seja
		<i>Albizia procera Roxb.</i>	Gurar
		<i>Leucaena leucocephala Lamk.</i>	Subabool
		<i>Mimosa pudica L.</i>	Lajwanti
		<i>M. rubicaulis Sensus.</i>	Shiahkanta
		<i>Pithecellobium dulce Roxb.</i>	Jangli imli
		<i>Prosopis spicigera L.</i>	Sami
61.	Moraceae	<i>Ficus hispida L.</i>	Bhuigular
		<i>Ficus religiosa L.</i>	Pipal
		<i>Ficus benghalensis L.</i>	Bargad
		<i>Ficus glomerata Roxb.</i>	Gular
		<i>Ficus carica L.</i>	Anjir
		<i>Ficus infectoria Roxb.</i>	Pakhar
		<i>Morus alba L.</i>	Shatoot
62.	Martyniaceae	<i>Martynia annua Linn.</i>	Hathojori
63.	Mognoliacea	<i>Michelia champaca</i>	Champa
64.	Musaceae	<i>Musa paradisiocia L.</i>	Kela
65.	Myrtaceae	<i>Eugenia gambolana Lam.</i>	Jamun
		<i>Eugenia heyneana Duthi in hook.f.</i>	Kathjamun
66.	Moringaceae	<i>Moringa oleifera Lam.</i>	Munga



67.	Myrsineae	<i>Embelia robustus</i> B. Clark in Hook.	Bibirang
68.	Nyctaginaceae	<i>Boerhavia diffusa</i> L.	Punarnava
69.	Nelumbonaceae	<i>Nelumbo nucifera</i> L	Kamal
70.	Nymphyceae	<i>Nymphaea alba</i> L	Kamal
		<i>Nymphaea</i>	Neelkamal
		<i>Nymphaea pubensens wild</i>	Gulabi kamal
		<i>Nymphaea rubra</i> Roxb.	Lalkamal
71.	Oleaceae	<i>Nyctanthes arbortristis</i> L.	Harsingar
		<i>Jasminum multiflorum</i> (Burm f.)	Safed chameli
		<i>Schrebera swietenoides</i>	Mokha
		<i>Jasminum auriculatum</i>	Juhi
		<i>Jasminum grandiflor</i>	Chameli
		<i>Jasminum sambor</i> L	Mogra
72.	Oxalidaceae	<i>Oxalis corniculata</i> L.	Khattibuti
		<i>Biophytum sensitivum</i> L.	Lajwanti
73.	Oretidoceae	<i>Vanda temeioli</i>	Vanda
74.	Pandanoceae	<i>Pandanus odoratissimus</i>	Kheera
75.	Papaveraceae	<i>Argemone mexicana</i> L.	Pili katai
		<i>Argemone ochroleuca</i> L.	Katai
		<i>Papaver somnifera</i>	Opium
76.	Polygalaceae	<i>Polygala arvensis</i> Willd.	Phutani
77.	Portulacaceae	<i>Portulaca oleracea</i> L.	Kulfa
		<i>Portulaca quadrifida</i> L.	Khatechwal
78.	Plumbaginaceae	<i>Plumbago zylanica</i> L.	Chitrak
79.	Primulaceae	<i>Anagallis arvensis</i> L.	Jonkmari
80.	Polygonaceae	<i>Rumex dentalus</i> L.	Janglipalk



		<i>Polygonum glabrum Willd.</i>	
81.	Poaceae	<i>Bambusa arundinacea (Retz.) Willd.</i>	Bans
		<i>Cymbopogon martini Roxb.</i>	Sarra
		<i>Cymbopogon litrolus</i>	Lemengrass
		<i>Cynodon dactylon</i>	Doobgrass
		<i>Demostochya bipimola</i>	
		<i>Ergrostics</i>	
		<i>Spirobolous</i>	
		<i>Themeda</i>	
		<i>Apluda</i>	
82.	Periploceae	<i>Hemidesmus indicus L</i>	Annatmool
83.	Piperaceae	<i>Piper longum L</i>	Londipeper
84.	Rannunculaceae	<i>Delphinium denudolum</i>	
		<i>Nigella saliva L</i>	Jaldhania
85.	Rosaceae	<i>Prunus delius</i>	Badam
		<i>Rosa lentifolia</i>	Gulab
86.	Rhamnaceae	<i>Ventilago denticulata Willd.</i>	Keoti
		<i>Ziziphus xylopyrus (Retz.) Willd.</i>	Ghont
		<i>Z. oenoplia L.</i>	Makor
		<i>Z. numularia (Burm.f) W & A</i>	Jharberi
		<i>Z. mauritiana Lam.</i>	Ber
87.	Rutaceae	<i>Murraya Koenig L.</i>	Methi neem
		<i>M. exotica L.</i>	Madhukamini
		<i>Limmonia acidissima L.</i>	Bilsena
		<i>Aegle marmelos L</i>	Bel
		<i>Feronia limonia L.</i>	Kainth



88.	Rubiaceae	<i>Borreria pusilla</i> (Wall) D.C. prodr.	
		<i>Adina cordifolia</i> Hook.f. ex. Brandis.	Haldu
		<i>Morinda tinctoria</i> Roxb.	Aal
		<i>Mytragyna parvifolia</i> (Roxb.) Korth.	Kaim
		<i>Hymenodictyon axcelsum</i> Roxb.	Bhonrsal
		<i>Ixora arborea</i> Roxb	Kau
		<i>Gardenia gummifera</i> L.	Banderladdu
		<i>G. latifolia</i> Ait.	Papra
		<i>G. lucida</i> Roxb.	Dikamali
		<i>G. turgida</i> Roxb.	Phetra
		<i>Randia dumetorum</i> Lam.	Mainphal
		<i>R. ulginosa</i> (Retz.) DC proder	Pindalu
89.	Salvadoraceae	<i>Salvadora</i>	
90.	Sturculiaceae	<i>Helicteres isora</i> L.	Marorphali
		<i>Sturculia urens</i> Roxb.	Kulu
		<i>Pterospermum oenifolium</i>	Muchkand
91.	Simarobuaceae	<i>Ailanthus excelsa</i> Roxb.	Mahaneem
		<i>Balanite aegyptica</i> Del.	Hingote
92.	Sapindaceae	<i>Dodonaea angustifolia</i> L.	Jangli meholi
		<i>Sapindus trifoliata</i> L.	Reetha
		<i>Schleichera oleosa</i> Willd.	Kusum
93.	Sapotaceae	<i>Madhuca longifolia</i> J. Koenig	Mahwa
		<i>Mimusops elengi</i> L.	Maulsri
		<i>Manilkara hexandra</i> (Roxb.)	Khirmi
		<i>Manilkara sapota</i> L	Chiku
94.	Solanaceae	<i>Datura metal</i> L.	Kaladhatura



		<i>D. stromium L.</i>	Safeddhatura
		<i>Physalis minima L.</i>	Banphutka
		<i>Solanum nigrum L.</i>	Makoi
		<i>S. xanthocarpum Schrad. & Wendl.</i>	Bhatkatiya
		<i>S. indicum L.</i>	Janglibhata
		<i>Withania sominifera Linn. Dunal.</i>	Aswagandha
95.	Scrophulariaceae	<i>Kickxia ramosissima Wall. Jancher</i>	Kanodi
		<i>Verbascum thapsus L.</i>	Gidartamaku
		<i>V. chinensie (Linn.) santapau</i>	Gidartamaku
		<i>Digitalis purpurea</i>	Tilpusp
96.	Smilacaceae	<i>Smilax zeylanica L.</i>	Ramdatoon
97.	Santalaceae	<i>Santalum album</i>	Chandan
98.	Tiliaceae	<i>Corchorus aestuans L.</i>	Shan
		<i>Grewia tiliifolia Vahl.</i>	Dhaman
		<i>G. hirsute Vahl.</i>	Gangarua
		<i>G. asiatica L.</i>	Phalsa
		<i>Triumfetta rotundifolia Jacq.</i>	Chikti
		<i>Eleocarpus sphaericus</i>	Rudraksh
99.	Tropaceae	<i>Trapa</i>	Singara
100.	Ulmaceae	<i>Holoptelea integrifolia (Roxb.)</i>	Chirol
101.	Vitaceae	<i>Cayratia cornosa Gugnep.</i>	Jangli angoor
		<i>Vitis latifolia Roxb.</i>	Dokerbela
		<i>Cissus quadrangularis L.</i>	Hadjoj
102.	Verbenaceae	<i>Leea asiatica L.</i>	Cawaokhar
		<i>Lantana camara L. (all species)</i>	Raimunya
		<i>Tectona grandis L.</i>	Sagoun



		<i>Gmelina arborea</i> Roxb.	Khamer
		<i>Vitex negundo</i> L.	Nirgundi
		<i>Clerodendrum indicum</i> L. Kuntze.	Barangi
103.	Valerianoaceae	<i>Nardostochys grandifolia</i>	Jatamasi
104.	Zingiberaceae	<i>Curcuma aromatica</i> L.	Vanhaldi
		<i>Curcuma longa</i>	Haldi
		<i>Zingiber officinales</i>	Adrak
105.	Zygophyllaceae	<i>Tribulus terrestris</i> L.	Chota gokhru
Gymnosperms Plant			
1.	Araucariaceae	<i>Agathis</i>	
		<i>Auricaria</i>	
2.	Cupressaceae	<i>Juniparus</i>	
		<i>Cupresus</i>	
		<i>Cupresus sp.</i>	
		<i>Juniparous communis</i>	
		<i>Thuja</i>	
3.	Cycadaceae	<i>Cycas rhomphi</i>	
		<i>Cycas revolute</i>	Sago
		<i>Cycas cercinella</i>	
4.	Ephedraceae	<i>Ephedra gerardiana</i>	Assman booli
5.	Ginkgoaceae	<i>Gingo biloba</i>	Maiden-hair tree
6.	Pinaceae	<i>Pinus roxburghi</i>	Cheer
		<i>Pinus sp.</i>	
7.	Podocarpaceae	<i>Podocarpus</i>	
8.	Zamiaceae	<i>Zamia</i>	Chigua



Pteridophytes			
1.	Equisetaceae	<i>Equisetum</i>	Horse tail
2.	Marsileaceae	<i>Merselia sp.</i>	Pepperwort
3.	Pteridaceae	<i>Pteris</i>	
4.	Pteridaceae	<i>Pteris sp.</i>	
5.	Pteridaceae	<i>Adiantum</i>	Madein hair
6.	Salviniaceae	<i>Salvinia molesta</i>	
7.	Salviniaceae	<i>Azolla sp.</i>	Duckweed fern
Bryophyte			
1	Anthocerotaceae	<i>Anthoceros</i>	Hornworts
	Cyathodiaceae	<i>Cyathodium</i>	
	Funariaceae	<i>Funeria sp</i>	
	Hypnaceae	<i>Hypnum sp</i>	
	Ricciaceae	<i>Riccia sp.</i>	
Algae			
1.	Chlorophyceae	<i>Volvox</i>	
2.	Chlorophyceae	<i>Spyrogyra</i>	
3.	Chlorophyceae	<i>Zynnema</i>	
4.	Chlorophyceae	<i>Odogonium</i>	
5	Chlorophyceae	<i>Chara</i>	

Table-3: Plant diversity inside university campus: Submitted by: Mr. Tinku Kumar, Lab of Ecology, Department of Botany, Dr.H.S.G.V.V, Sagar

Sl no.	Family	Botanical Name	Local Name	Habit
1.	Anacardiaceae	<i>Buchanania lanzan</i> Spreng.	Achar	Tree
		<i>Lannea coromandelica</i> (Houtt.) Merr.	Moyan	Tree
		<i>Mangifera indica</i> L.	Aam	Tree



2.	Annonaceae	<i>Annona reticulate</i> L.	Ramphal	Tree
		<i>Annona squamosa</i> L.	Seetaphal	Tree
		<i>Miliusato mentosa</i> (Roxb.) Sinclair	Kari	Tree
		<i>Polyalthia longifolia</i> (Sonner.) Thw.	Ashok	Tree
		<i>Polyalthia pendula</i>	Ashok	Tree
3.	Apocynaceae	<i>Alstonia scholaris</i> (L.) R. Br.	Saptparni	Tree
		<i>Holarrhena antidysenterica</i> Wallich	Dudhi	Tree
		<i>Plumeria alba</i> L.	Champa	Tree
		<i>Thevetia peruviana</i> (Pers) K. Schum.	Pili Kaner	Tree
		<i>Wrightia tinctoria</i> R. Br.	Badi Dudhi	Tree
		<i>Beaumontia grandiflora</i> Roxb.	Trumpet Climber	Climber
		<i>Cryptolepis buchananii</i> Roen. &Schult.	Kali Dudhi	Climber
		<i>Ichnocarpus frutescens</i> (L.) R. Br.	kali dudhi	Climber
4.	Arecaceae	<i>Phoenix sylvestris</i> Roxb.	Khajur	Tree
		<i>Roystonea regia</i> Kunth.	Bottle Palm	Tree
5.	Asclepiadaceae	<i>Calotropis gigantea</i> (L.) R. Br.	Aak	Tree
		<i>Calotropis procera</i> (Aiton.) R. Br.	Aak	Shrub
		<i>Dregea volubilis</i> (L.f.) Beth. Ex Hook.f.	Dudhi	Climber
		<i>Gymnema sylvestre</i> R.Br.	Gudmaar	Climber
		<i>Hemidemus indicus</i> (L.) R.Br.	Anatmool	Climber
		<i>Pergularia daemia</i> (Forssk.) Chiov.		Climber
6.	Averrhoaceae	<i>Averrhoa carambola</i> L.	kamrakh	Tree
7.	Balanitaceae	<i>Balanites aegyptiaca</i> (L.) Delile	Hingota	Tree
8.	Bignoniaceae	<i>Jacaranda mimosaeifolia</i> D. Don.	Neeli Gulmohar	Tree
		<i>Kigelia pinnata</i> (Jacq.) DC.	Balamkheera	Tree



		<i>Millingtonia hortensis</i> Roxb.	Akash neem	Tree
		<i>Spathodea campanulata</i> P. Beauv.	Indian Euliptree	Tree
		<i>Tabebuia aurea</i> B & H.	Trumpet tree	Tree
		<i>Tabebuia arosea</i> (Bertol.) DC.	Trumpet tree	Tree
		<i>Tecoma stans</i> (L.) Juss. Ex Kunth	Tecoma	Tree
9.	Bixaceae	<i>Bixa orellana</i> L.	Sinduri	Tree
10.	Bombacaceae	<i>Bombax ceiba</i> L.	Semal	Tree
		<i>Bombax insigne</i> Wall.	Semal	Tree
		<i>Ceiba pentandra</i> (L.) Gaertn.	Kapok	Tree
11.	Boraginaceae	<i>Cordia dichotoma</i> G. Foster	Lasoda	Tree
		<i>Cordia macleodii</i> (Griff.) Hook.	Rusa	Tree
		<i>Ehretia laevis</i> Roxb.	Dataranga	Tree
12.	Burseraceae	<i>Boswellia serrata</i> Roxb. ex Colebr.	Salai	Tree
		<i>Commiphora wightii</i> Wna.	Goggle plant	Tree
		<i>Garuga pinnata</i> Roxb.	Kekada	Tree
13.	Caesalpiniaceae	<i>Bauhinia racemosa</i> Lamk.	Asta	Tree
		<i>Bauhinia retusa</i> Poir.	Asta	Tree
		<i>Bauhinia variegata</i> L.	Kachnar	Tree
		<i>Cassia fistula</i> L.	Kirwara	Tree
		<i>Cassia siamea</i> Lamk.	Samia	Tree
		<i>Delonix regia</i> (Bojer ex Hokk.) Rafin.	Gulmahar	Tree
		<i>Peltophorumpterocarpum</i> (DC.) Baker ex K. Heyne	Peltophorum	Tree
		<i>Tamarindus indica</i> L.	Imli	Tree
		<i>Bauhinia vahlii</i> (Wight & Arn.) Benth.	Mehul Bela	Climber
		<i>Bauhinia vahlii</i> Wt. & Arn.	Mehulbela	Climber
14	Capparaceae	<i>Capparis zeylanica</i> L.	Tent	Climber



15	Caricaceae	<i>Carica papaya</i> L.	Papeeta	Tree
16.	Casuarinaceae	<i>Casuarina equisetifolia</i> L.	Casuarina	Tree
17.	Celastraceae	<i>Elaeodendron glaucum</i> Pers.	Jamarasi	Tree
		<i>Celastrus paniculatus</i> Willd.	Maalkangani	Climber
18.	Combretaceae	<i>Anogeissus latifolia</i> (Roxb. Ex DC.) Wall.	Dhavra	Tree
		<i>Terminalia arjuna</i> (Roxb. ex DC.) Wight & Arn	Arjun	Tree
		<i>Terminalia bellirica</i> (Gaerten.) Roxb.	Bahera	Tree
		<i>Terminalia catappa</i> L.	Jangali Badam	Tree
		<i>Terminalia tomentosa</i> (Roxb. ex DC.) Wight & Arn	Saja	Tree
19.	Convolvulaceae	<i>Ipomea aquatica</i> Forsk. Syn. <i>I. reptans</i> (L.) Poir.		Climber
20.	Dioscoreaceae	<i>Dioscorea bulbifera</i> L.		Climber
21.	Ebenaceae	<i>Diospyros cordifolia</i> Roxb.	Bistendu	Tree
		<i>Diospyros melanoxylon</i> Roxb.	Tendu	Tree
22.	Euphorbiaceae	<i>Bridelia retusa</i> (L.) Spreng.	Kasai	Tree
		<i>Mallotus philippensis</i> (Lam.) Muell.	Sindur	Tree
		<i>Phyllanthus acidus</i> (L.) Skeels	harfarreodi	Tree
		<i>Phyllanthus emblica</i> L.	Aola	Tree
23.	Fabaceae	<i>Butea monosperma</i> (Lamk.) Taub.	Palas	Tree
		<i>Dalbergia paniculata</i> Roxb.	Fasi	Tree
		<i>Dalbergia sissoo</i> Roxb.	Sisoo	Tree
		<i>Erythrina suberosa</i> Roxb.	Harua	Tree
		<i>Gliricidia sepium</i> (Jacq.) Kunth ex Walp	Gliricidia	Tree
		<i>Pongamia pinnata</i> (L.) Pierre	Kanji	Tree
		<i>Pterocarpus marsupium</i> Roxb.	Bija	Tree
		<i>Abrus precatorius</i> L.	Ratti	Climber



		<i>Cajanus scarabaeoides (L.) Thouars</i>	Jangali Arhar	Climber
		<i>Clitoria ternatea</i> L.	Aparajita	Climber
		<i>Mucuna pruriens</i> (L.) DC.	Konch	Climber
24.	Lamiaceae	<i>Gmelina arborea</i> Roxb.	Ghamer	Tree
		<i>Vitex negundo</i> L.	Nirgudi	Tree
25.	Liliaceae	<i>Asparagus recemosus</i> Willd.	Satavar	Climber
26.	Lythraceae	<i>Lagerstroemia parviflora</i> Roxb.	Ladia	Tree
27.	Malvaceae	<i>Kydia calycina</i> Roxb.	Barga	Tree
		<i>Thespesia populnea</i> (L.) Soland. Ex Correa	Paras Peepal	Tree
28.	Meliaceae	<i>Azadirachta indica</i> A. Juss.	Neem	Tree
29.	Menispermaceae	<i>Tinospora cordifolia</i> (Willd.) Miers ex Hook.f. & Thoms.	Giloy	Climber
30.	Mimosaceae	<i>Acacia auriculiformis</i> A. Cunn. ex Benth	Auri	Tree
		<i>Acacia catechu</i> (L.f.) Willd.	Khair	Tree
		<i>Acacia leucophloea</i> (Roxb.) Willd.	Renja	Tree
		<i>Acacia nilotica</i> (L.) Willd.	Babul	Tree
		<i>Albizia lebbek</i> (Roxb.) Benth.	Kala siris	Tree
		<i>Albizia procera</i> (Roxb.) Benth.	Safed siris	Tree
		<i>Dichrostachys cinerea</i> (L.) Wight & Arn	Chinese lantern	Tree
		<i>Pithecellobium dulce</i> (Roxb.) Benth.	Jangal jalebi	Tree
		<i>Prosopis juliflora</i> (Swartz) DC.	Jangalikeekar	Tree
		<i>Acacia pennata</i> (L.) Willd	Khamer	Climber
		<i>Mimosa hamata</i> Willd.	Aar	Climber
31.	Moraceae	<i>Artocarpus heterophyllus</i> Lam.	kathahal	Tree
		<i>Artocarpus lakoocha</i> Roxb.	Badhar	Tree
		<i>Ficus benghalensis</i> L.	Bargad	Tree



		<i>Ficus elastic</i> Roxb.	Rabar	Tree
		<i>Ficus glomerata</i> Roxb.	Umar	Tree
		<i>Ficus religiosa</i> L.	Peepal	Tree
32.	Moringaceae	<i>Moringa oleifera</i> Lamk.	Sahjana	Tree
33.	Myrtaceae	<i>Eucalyptus gumbellata</i> Dum.	Liptis	Tree
		<i>Psidium guajava</i> L.	Bihi	Tree
		<i>Syzygium cumini</i> (L.) Skeels	Jamun	Tree
34.	Nyctaginaceae	<i>Bougainvillea specabilis</i> Willd.	Bougainvillea	Shrub
35.	Oleaceae	<i>Nyctanthus arbor-tristis</i> L.	Sarsringar	Tree
36.	Passifloraceae	<i>Passiflora foetida</i> L.	Kamandal	Climber
37.	Poaceae	<i>Dendrocalamus strictus</i>	Baans	Tree
38.	Polygonaceae	<i>Antigonon leptopus</i> Hook. & Am	Antigonum	Climber
39.	Proteaceae	<i>Grevillea robusta</i> A. Cunn. Ex R. Br.	Falsa	Tree
40.	Putranjivaceae	<i>Putranjiva roxburghii</i> Wallich	Putangiva	Tree
41.	Rhamnaceae	<i>Ziziphus jujube</i> Lamk.	Beri	Tree
		<i>Ziziphus xylopyrus</i> Willd.	Ghont	Tree
		<i>Ventilago denticulate</i> Willd.	Keotibela	Climber
		<i>Ziziphus oenoplia</i> (L.) Mill.	Makor	Climber
42.	Rubiaceae	<i>Gardenia latifolia</i> Ait.	Papda	Tree
		<i>Haldinia cordifolia</i> (Roxb.) Ridsd.	Haldu	Tree
		<i>Anthocephalus cadamba</i> (Roxb.) A. Rich	Kadam	Tree
		<i>Ixora parniflora</i> Vahl.	Kau	Tree
		<i>Mitragyna parvifolia</i> (Roxb.) Korth.	Mundi	Tree
		<i>Morinda tinctoria</i> Roxb.	Aal	Tree
43.	Rutaceae	<i>Aegle marmelos</i> (L.) Correa	Bel	Tree
		<i>Chloroxylon swietenia</i> DC.	Bhirra	Tree



		<i>Citrus limon</i> (L.) Burm.f.	Neebu	Tree
		<i>Feronia limonia</i> (L.) Swingle.	Kaitha	Tree
		<i>Murraya exotica</i> L.	Kunti	Tree
		<i>Murraya koenigii</i> (L.) Spreng	meetha neem	Tree
44.	Salicaceae	<i>Flacourtia indica</i> (Burm.f.) Merr.	Kaker	Tree
	Santalaceae	<i>Santalum album</i> L.	Chandan	Tree
	Sapindaceae	<i>Schleichera oleosa</i> (Lour.) Oken.	Kosam	Tree
45.	Sapotaceae	<i>Madhuca indica</i> J. F. Gmelin	Mahua	Tree
		<i>Manilkar azapota</i> (L.) P. Royan	Cheeku	Tree
		<i>Mimusops elengi</i> L.	Molshri	Tree
		<i>Mimusops hexandra</i> Roxb.	Khirni	Tree
		<i>Sapindus emarginatus</i> Vahl.	Reetha	Tree
46.	Simaroubaceae	<i>Ailanthus excelsa</i> Roxb.	Mahaneem	Tree
47.	Sterculiaceae	<i>Sterculia urens</i> Roxb.	Kullu	Tree
48.	Tiliaceae	<i>Grewia tiliifolia</i> Vahl.	Dhaman	Tree
49.	Ulmaceae	<i>Holoptelia integrifolia</i> (Roxb.) Planch	Chirol	Tree
50.	Verbenaceae	<i>Tectona grandis</i> L.f.	Sagon	Tree
		<i>Lantana camera</i> L.	Lantana	Shrub
51.	Vitaceae	<i>Ampelocissus latifolia</i> (Roxb.) Planch.		Climber

Table-4: List of poisonous plants recorded from Sagar District and adjoining area

S.N o.	Family	Botanical Name	Local Name	Habit
1.	Acanthaceae	<i>Andrographis paniculata</i> Nees.	Kalmegh	Herb
2.	Amaryllidaceae	<i>Agave americana</i>	Hanthi-Sengar	Shrub
3.	Araceae	<i>Acorus calamus</i> L.	Bach	Herb
		<i>Acorus gramineus</i> Aiton.	Hanthi-panv	Herb
		<i>Amorphallus paeonifolius</i> (Dennst.) Nicoloson	Suran	Herb
		<i>Arisaemia tortuosum</i> Schott.	Dhei	Herb
		<i>Plesmonium margaritifera</i> (Roxb.) Schott.	Dhei, azomut	Herb

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		<i>Sauromatum guttatum</i> (Wall.)	Bhasamkand	Herb
4.	Aristolochiaceae	<i>Aristolochia india</i> L.	Isharmul	Herb
5.	Asclepidaceae	<i>Hemidesmus indicus</i> L.	Hindisalsa	Shrub
6.	Astearacea	<i>Parthenium hysterophorus</i> L.	Gajar gass	Herb
7.	Brassicaceae	<i>Brassica campestris</i> L.	Sarson	Herb
8.	Caesalpiniaceae	<i>Cassia fistula</i> L.	Amaltas	Tree
9.	Celastraceae	<i>Celastrus paniculatus</i> Wild.	Malkangni	Herb
10.	Cannabaceae	<i>Cannabis sativa</i> (Tourn.)L.	Bhang	Herb
11.	Dioscoriaceae	<i>Dioscorea bulbifera</i> L.	Anghetha	Herb/Climber
12.	Euphorbiaceae	<i>Baliospermum montanum</i> Muell.Arg.	Danti	Shrub
		<i>Bridella retusa</i> Spreng.	Ritha	Tree
		<i>Croton tiglium</i> L.	Jamalgota	Tree
		<i>Euphorbia antiquorum</i> L.	Thour	Shrub
		<i>Euphorbia hirta</i> L.	Dudhi (Snake weed)	Herb
		<i>Euphorbia royleana</i> L.	Senhur, thour	Shrub
		<i>Jatropha gossypifolia</i> L.	Bhernda, Verenda	Shrub
		<i>Manihot esculanta</i> crantz	Rotialu	Shrub
		<i>Phyllanthus urinaria</i> L.	Hazar mani	Herb
13.	Fabaceae	<i>Psoralea carylifolia</i> DC.	Babchi	Herb
	Fabaceae	<i>Mucuna prurita</i> Hook.	Karench	Herb/Climber
14.	Liliaceae	<i>Scilla indica</i> Baker	Jangli-piyaz	Herb
		<i>Urginea indica</i> Kunth	Jangali- piyaz	Herb
		<i>Aloe vera</i> (L.) Burm .f.	Gawarpatha	Shrub
15.	Malvaceae	<i>Gossypium herbaceum</i> L.	Cotton	Shrub
16.	Myrtaceae	<i>Eucalyptus lanceolata</i>	Eucalyptus	Tree
17.	Pedaliaceae	<i>Sesamum orientale</i> L.	Tili	Herb
18.	Poaceae	<i>Paspalum scrobiculatum</i> L.	Kodo	Herb
		<i>Sorghum vulgare</i> L.	Juar , Jowar	Herb
		<i>Zea mays</i> L.	Makka	Herb
		<i>Dendrocalamus strictus</i> Nees	Bans	Herb
19.	Rubiaceae	<i>Anthocephalus cadamba</i> Miq.	Cadamba	Tree
20.	Rutaceae	<i>Murraya paniculate</i> L.	Marchula	Tree
21.	Solanaceae	<i>Hyoscyamus niger</i> L.	Khurasani-ajvayan	Herb
		<i>Physalis minima</i> L.	Chirpoti	Herb
		<i>Solanum incanum</i> L.	Asind	Shrub
		<i>Solanum tuberosum</i> L.	Alu	Herb
		<i>Withania somnifera</i> Dun.	Asgand	Shrub
		<i>Capsicum annuum</i> L.	Lal-Mirich	Herb
		<i>Capsicum frutescens</i> L.	Lal- Mircha	Herb
22.	Umbelliferae	<i>Daucus carota</i> L.	Gajar	Herb
23.	Urticaceae	<i>Fleurya interrupta</i> Gaudich	Lal bichua	Herb
24.	Verbenaceae	<i>Duranta plumieri</i> L.	Mehndi	Shrub
		<i>Lantana aculeata</i> L.	Vantulsi	Shrub
		<i>Lantana camara</i> L.	Vantulsi	Shrub
		<i>Verbena officinalis</i> L.	Pamukh	Herb

**Table-5: List of invasive alien species**

S. No.	Family	Botanical Name	Habit
1	Fabaceae	<i>Acacia auriculiformis</i> A. Cunn. ex Benth.	
2	Asteraceae	<i>Acanthospermum hispidum</i> DC.	Herb
3	Asteraceae	<i>Ageratum conyzoides</i> L.	Herb
4	Amaranthaceae	<i>Alternanthera sessilis</i> (L.) R. Br. ex DC.	Herb
5	Amaranthaceae	<i>Amaranthus spinosus</i> L.	Herb
6	Primulaceae	<i>Anagalli sarvensis</i> L.	
7	Polygonaceae	<i>Antigonon leptopus</i> Hook. & Arnott	
8	Papaveraceae	<i>Argemone mexicana</i> L.	Herb
9	Papaveraceae	<i>Argemone ochroleuca</i> Sweet	Herb
10	Asteraceae	<i>Bidens pilosa</i> L.	Herb
11	Asteraceae	<i>Blainvillea acmella</i> (L.) Philipson	
12	Asteraceae	<i>Blumeala cera</i> (Burm. f.) DC.	
13	Apocynaceae	<i>Calotropis gigantea</i> (L.) R. Br.	
14	Apocynaceae	<i>Calotropis procera</i> (Aiton) R. Br.	
15	Cannabaceae	<i>Cannabis sativa</i> L.	
16	Sapindaceae	<i>Cardiospermum halicacabum</i> L.	
17	Fabaceae	<i>Cassia absus</i> L.	
18	Fabaceae	<i>Cassia occidentalis</i> L.	
19	Fabaceae	<i>Cassia pumila</i> Lam.	Herb
20	Fabaceae	<i>Cassia tora</i> L.	Herb
21	Fabaceae	<i>Cassia uniflora</i> Mill.	Herb
22	Apocynaceae	<i>Catharanthus pusillus</i> (Murr.) G. Don	Herb
23	Amaranthaceae	<i>Celosia argentea</i> L.	
24	Poaceae	<i>Chloris barbata</i> Sw.	



25	Euphorbiaceae	<i>Chrozophora rottleri</i> (Geiseler) A. Juss. ex Spreng.	
26	Menispermaceae	<i>Cissampelo spareira</i> L.	
27	Cleomaceae	<i>Cleome viscosa</i> L.	Herb
28	Convolvulaceae	<i>Convolvulus arvensis</i> L.	
29	Asteraceae	<i>Conyza bipinnatifida</i> Wall.	
30	Malvaceae	<i>Corchorus aestuans</i> L.	
31	Malvaceae	<i>Corchorus capsularis</i> L.	
32	Malvaceae	<i>Corchorus fascicularis</i> Lam.	
33	Malvaceae	<i>Corchorus litorius</i> L.	
34	Malvaceae	<i>Corchorus trilocularis</i> L.	
35	Euphorbiaceae	<i>Croton bonplandianus</i> Boill.	
36	Convolvulaceae	<i>Cuscuta reflexa</i> R oxb.	
37	Poaceae	<i>Cynodon dactylon</i> (L.) Pers.	
38	Cyperaceae	<i>Cyperus difformis</i> L.	
39	Solanaceae	<i>Datura innoxia</i> Mill.	
40	Solanaceae	<i>Datura metel</i> L.	
41	Amaranthaceae	<i>Digera muricata</i> (L.) Mart.	
42	Poaceae	<i>Dinebraretro flexa</i> (Vahl) Panz.	
43	Poaceae	<i>Echinochloa colonum</i> (L.) Link	
44	Asteraceae	<i>Echinops echinatus</i> Roxb.	
45	Asteraceae	<i>Eclipta prostrata</i> (L.) L.	
46	Asteraceae	<i>Emilia sonchifolia</i> (L.) DC.	
47	Euphorbiaceae	<i>Euphorbia hirta</i> L.	
48	Euphorbiaceae	<i>Euphorbia hypericifolia</i> L.	
49	Euphorbiaceae	<i>Euphorbia pulcherrima</i> Willd. ex Klotzsch	
50	Euphorbiaceae	<i>Euphorbia thymifolia</i> L.	



52	Asteraceae	<i>Galinsoga parviflora</i> Cav.	
53	Asteraceae	<i>Glossocardia bosvallea</i> (L.f.) DC.	
54	Asteraceae	<i>Gnaphalium pensylvanicum</i> Willd.	
55	Lamiaceae	<i>Hyptis suaveolens</i> (L.) Poit.	
56	Balsaminaceae	<i>Impatiens balsamina</i> L.	
57	Fabaceae	<i>Indigofera astragalina</i> DC.	
58	Fabaceae	<i>Indigofera linifolia</i> (L. f.) Retz.	
59	Fabaceae	<i>Indigo feralinnaei</i> Ali.	
60	Fabaceae	<i>Indigoferatrita</i> L. f.	
61	Convolvulaceae	<i>Ipomoea carnea</i> Jacq.	Climber
62	Convolvulaceae	<i>Ipomoea eriocarpa</i> R. Br.	Climber
63	Convolvulaceae	<i>Ipomoea hederifolia</i> L.	Climber
64	Convolvulaceae	<i>Ipomoea nil</i> (L.) Roth.	Climber
65	Convolvulaceae	<i>Ipomoea obscura</i> (L.) Ker Gawl.	Climber
66	Convolvulaceae	<i>Ipomoea pes-tigridis</i> L.	Climber
67	Euphorbiaceae	<i>Jatropha curcas</i> L.	Shrub
68	Euphorbiaceae	<i>Jatropha gossypifolia</i> L.	Shrub
69	Asteraceae	<i>Lagascea mollis</i> Cav.	
70	Verbenaceae	<i>Lantana camara</i> L.	Shrub
71	Lamiaceae	<i>Leonotis nepetifolia</i> (L.) R. Br.	
72	Fabaceae	<i>Leucaena leucocephala</i> (Lamk.) De Wit	
73	Onagraceae	<i>Ludwigia octovalvis</i> (Jacq.) Raven	
74	Malvaceae	<i>Malvastrum coromandelianum</i> (L.) Gar.	
75	Martyniaceae	<i>Martynia annua</i> L.	Shrub
76	Plantaginaceae	<i>Mecardoniapro cumbens</i> (Mill.) Small	



77	Malvaceae	<i>Melochiacorchorifolia</i> L.	
78	Convolvulaceae	<i>Merremiae marginata</i> (Burm.f.) Hallier f.	
79	Fabaceae	<i>Mimosa pudica</i> L.	Herb
80	Lamiaceae	<i>Ocimum americanum</i> L.	Shrub
81	Oxalidaceae	<i>Oxalis corniculata</i> L.	Herb
82	Oxalidaceae	<i>Oxalis corymbosa</i> DC.	Herb
83	Asteraceae	<i>Parthenium hysterophorus</i> L.	Herb
84	Passifloraceae	<i>Passiflora foetida</i> L.	Climber
85	Piperaceae	<i>Peperomia pellucida</i> (L.) Kunth	Herb
86	Acanthaceae	<i>Peristrophe paniculata</i> (Forssk.) Brummitt	Herb
87	Solanaceae	<i>Physalis minima</i> L.	Herb
88	Solanaceae	<i>Physalis peruviana</i> L.	Herb
89	Fabaceae	<i>Pithecellobium dulce</i> (Roxb.) Benth.	Tree
90	Fabaceae	<i>Prosopis juliflora</i> (Swartz) DC.	Tree
91	Euphorbiaceae	<i>Ricinus communis</i> L.	Shrub
92	Acanthaceae	<i>Ruellia tuberosa</i> L.	Herb
93	Plantaginaceae	<i>Scoparia dulcis</i> L.	Herb
94	Malvaceae	<i>Sida acuta</i> Burm. f.	Herb
95	Solanaceae	<i>Solanum nigrum</i> L.	Herb
96	Asteraceae	<i>Sonchus asper</i> (L.) Hill.	
97	Asteraceae	<i>Sonchusoler aceus</i> L.	
98	Rubiaceae	<i>Spermacoce hispida</i> L.	
99	Asteraceae	<i>Spilanthes radicans</i> Jacq.	
100	Asteraceae	<i>Synedrella nodiflora</i> (L.) Gaertn.	Herb
101	Bignoniaceae	<i>Tecoma stans</i> (L.) Juss. ex Kunth	Shrub
102	Zygophyllaceae	<i>Tribulu terrestris</i> L.	



103	Asteraceae	<i>Tridax procumbens</i> L.	Herb
104	Malvaceae	<i>Triumfetta rhomboidea</i> Jacq.	Shrub
105	Typhaceae	<i>Typha angustifolia</i> L.	
106	Malvaceae	<i>Urena lobata</i> L.	
107	Malvaceae	<i>Waltheria indica</i> L.	
108	Asteraceae	<i>Xanthium strumarium</i> L.	

Table-6: List of poisonous herbs plants found in Sagar

S.No.	Family	Botanical Name	Local Name	Habit	Toxicity
1.	Acanthaceae	<i>Andrographis peniculata</i> Linn.	Kalmegh	Herb	Emetic
2.	Araceae	<i>Acorus calamus</i> Linn.	Bach	Herb	Purgative vomatic
		<i>Acorus gramineus</i> Soland.	Hanthi panv	Herb	Fatal, vomatic
		<i>Amarphophallus campanulatus</i> Roxb.	suran	Herb	Acrid, irritant
		<i>Plesmonium margantiferum</i> (Roxb.) Schoot.	Azomut	Herb	Irritant poison
		<i>Sauromatum guttatum</i> (Wall.Schott.)	Bhasamkand	Herb	Acrid irritant
		<i>Arisaema tortuosum</i> (Wall.) Schott.	Dhei	Herb	Acrid, irritant, vomatic
3.	Aristolochiaceae	<i>Aristolochia indica</i> Linn.	Isharmul	Herb	Use snake bite
4.	Cannabinaceae	<i>Cannabis sativa</i> (tourn.)Linn.	Bhang	Herb	Nacrotic poison
5.	Caryophyllaceae	<i>Saponaria vaccaria</i> Linn.	Musha	Herb	Irritant poison
6.	Convolvulaceae	<i>Cuscuta reflexa</i> Roxb.	Amarbel	Herb	Purgative
		<i>Convolvulus arvensis</i> Linn.	Harin padi	Herb	Purgative
		<i>Operculina turpethum</i> Linn.	Tarbud	Herb	Abortifacient
		<i>Ipomea aquatic</i> Forsk.	Kalmi-sag	Herb	Purgative poison
7.	Compositae	<i>Gnophalium luteo, album</i> Linn.	Cudweed	Herb	Live stock poison
8.	Cruciferae	<i>Parthenium hysterophorus</i> Linn.	Gajar gass	Herb	Purgative, Livestock poison
9.	Cucurbitaceae	<i>Cucumis trigonus</i> Roxb.	Jangli indrayan	Herb	Irritant poison, Purgative
		<i>Trichosanthes dioica</i> (Roxb.)	Janglipalval	Herb	Cathartic poison
10.	Dioscoreaceae	<i>Dioscorea bulbifera</i> L.	Anghetha	Herb	Emetic,acrid
11.	Euphorbiaceae	<i>Euphorbia hirta</i> Linn.	Dudhi	Herb	Irritant poison
12.	Fabaceae	<i>Mucuna pruriens</i> (L.)DC.	Karench	Herb	Irritant poison
		<i>Abbrus precatorius</i> Linn.	Gunchi	Herb	Blood poison
		<i>Psoralea corylifolia</i> DC.	Babchi	Herb	Emetic, vomitic



13.	Liliaceae	<i>Gloriosa superb (Linn.)</i>	Kalihari	Herb	Emetic poison
		<i>Urginea indica Kunth.</i>	Jangli-pyaz	Herb	Purgative, Narcotic
14.	Papaveraceae	<i>Argemone maxicana Linn.</i>	Pili Catery	Herb	Seeds cause dropsy
15.	Poaceae	<i>Sorghum vulgare Linn.</i>	Jowar	Herb	Livestock poison
16.	Sapindaceae	<i>Cardiospermum halicacabum Linn.</i>	Jyotismati	Herb	Irritant poison
17.	Solanaceae	<i>Datura fastuosa Linn.</i>	Datura	Herb	Brain poison
		<i>Datura metel Linn.</i>	Datura	Herb	Brain poison
		<i>Datura stramonium Linn.</i>	Datura	Herb	Brain poison
		<i>Hyoscyamusniger Linn.</i>	Khurasaniajvayan	Herb	Emetic poison
18.	Verbenaceae	<i>Verbena officinalis Linn.</i>		Herb	Use snake bite
19.	Zygophyllaceae	<i>Tribulus terrestris Linn.</i>	Chooto-gokhru	Herb	Heart poison

Table-7: List of poisonous shrub plants found in Sagar

S.No.	Family	Name of Plants Species	Local Name	Habit	Toxicity
1.	Amaryllidaceae	<i>Agave americana Linn.</i>	Hanthi-sengar	Shrub	Livestock poison
2.	Apocynaceae	<i>Rauwolfia tetraphylla Linn.</i>	Nai	Shrub	Heart poison
3.	Asclepidaceae	<i>Calotropis procera (Ait.)R. Br.</i>	Madar	Shrub	Eye poison
		<i>Cryptostegia grandiflora R.Br.</i>	Madar	Shrub	Cardiac poison
		<i>Hemidesmus idicus R.Br.</i>	Hindisalsa	Shrub	Purgative
		<i>Calotropis gigantea (Linn.)R. Br.</i>	Madar	Shrub	Cardiac poison
4.	Araceae	<i>Aristolochia indica Linn.</i>	Isharmul	Shrub	Use snake bite
5.	Celastraceae	<i>Celastrus paniculatus Wild</i>	Malkangni	Shrub	Aborifacient, Emetic
6.	Euphorbiaceae	<i>Euphorbia nivulia Ham.</i>	Thaur	Shrub	Irritant and eye poison
		<i>Euphorbia royleana Linn.</i>	Senhur	Shrub	eye poison
		<i>Jatropha curcas Linn.</i>	Jangili-aravdi	Shrub	Purgative, emetic, irritant
		<i>Jatropha Gossypifolia Linn.</i>	Bhernda	Shrub	Purgative, emetic, poison
		<i>Baliospermum montanum Muell.Arg.</i>	Danti	Shrub	Acronarcotic poison
		<i>Ricinus communis Linn.</i>	Arandi	Shrub	Purgative, emetic, fatal poison
7.	Liliaceae	<i>Aloe vera (barbadensis) Linn.</i>	Gavyar patha	Shrub	Aborifacient purgative, narcotic
8.	Malvaceae	<i>Sida rhombifolia Linn.</i>	Sahadebi	Shrub	Purgative,
9.	Plumbaginaceae	<i>Plumbago zeylanica Linn.</i>	chitarak	Shrub	Irritant poison
10.	Solanaceae	<i>Withania somnifera Dun.</i>	Asgand	Shrub	Aborifacient
11.	Verbenaceae	<i>Lantana camara Linn.</i>	Vantulsi	Shrub	eye poison

Table-8: List of of poisonous tree found in Sagar

S.No.	Family	Name of Plants Species	Local Name	Habit	Toxicity
1.	Anacardiaceae	<i>Samecarpus anacardium Linn.</i>	Bhilma	Tree	Brain poison
2.	Annonaceae	<i>Annona Squamosa Linn.</i>	Sitaphal	Tree	Eye poison
3.	Apocynaceae	<i>Thevetia neriofolia</i>	Pila kaner	Tree	Heart poison
		<i>Thevetia peruviana A.Juss</i>	Pila kaner	Tree	Heart poison
		<i>Nerium indicum Mill.</i>	Kaner	Tree	Cardial poison



		<i>Nerium olender</i> Linn.	Kaner	Tree	Heart poison
		<i>Holarrhena antidysenterica</i> Wall.	Dudhi	Tree	Protoplasmic poison
4.	Caesalpiniaceae	<i>Cassia fistula</i> Linn.	Amaltas	Tree	Purgative, emetic
5.	Celastraceae	<i>Elaeodendron glaucum</i> Pers.	Jamrassi	Tree	Brain poison
6.	Combretaceae	<i>Terminalia bellirica</i> (Roxb.)	Bahera	Tree	Narcotic
7.	Ebenaceae	<i>Diospyros montana</i> Roxb.	Bistendu	Tree	Livestock poison
8.	Euphorbiaceae	<i>Bridelia retusa</i> Spreng.	Kusai	Tree	Aborifacient
		<i>Mallotus philippinensis</i>	Sinduri	Tree	Cathartic
9.	Meliaceae	<i>Melia azedarach</i> Linn.	Bakayan	Tree	Asphyxiae poison
10.	Rubiaceae	<i>Anthocephalus cadamba</i> Linn.	Cadam	Tree	purgative, Aborifacient
		<i>Randia dumentorum</i> (Retz)	Mainphal	Tree	Acro- emetic poison
11.	Rutiaceae	<i>Ruta graveolens</i> Linn.	Satari	Tree	Acro- emetic poison
12.	Sapindaceae	<i>Schleichera oleosa</i> (Lour.)	Kusum	Tree	Irritant poison

Table-9: List of aquatic plants found in the university Botanical Garden.

S. No.	Family	Plant Name
1.	Alismataceae	<i>Alisma plantagoaquatica</i> <i>Sagittarias agittifolia</i>
2.	Araceae(Arum family)	<i>Pistia stratiotes</i>
3.	Aponogetonaceae	<i>Aponogeton natans</i>
4.	Convolvulaceae(Morning glory family)	<i>Ipomoea aquatica</i>
5.	Cyperaceae	<i>Cyperus articulatus</i>
6.	Ceratophyllaceae (Horn wrort family)	<i>Ceratophyllum demersum</i>
7.	Equisetaceae(Horsetail or scouring family)	<i>Equisetum</i>
8.	Gentianaceae(Gentian family)	<i>Nymphoides cristatum</i>
9.	Hydrocharitaceae(Frogbit family)	<i>Hydrilla verticillata</i> <i>Valisneria spiralis</i> <i>Hydrocharis dubia</i>
10.	Isoetaceae(Qwillwort family)	<i>Isoetes</i>
11.	Lemnaceae(Duckweed family)	<i>Lemna minor</i> <i>Wolffia arrhiza</i> <i>Lemnatis ulca</i>
12.	Lantibulariaceae (Bladderwort family)	<i>Utricularia stellaris</i>
13.	Marsileaceae(Water clove family)	<i>Marsilea</i>
14.	Nymphaceae	<i>Nymphaea stellata</i> <i>Nelumbo nucifera</i>
15.	Onagraceae(evening primrose family)	<i>Jussiaea repens</i>
16.	Potamogetonaceae(Pond weed family)	<i>Potamogetan pectinatus</i> <i>Potamogetan crispus</i> <i>Potamogetan nodosus</i> <i>Ruppia maritima</i>
17.	Polygonaceae	<i>Polygonum glabrum</i> <i>Polygonum barbatum</i>
18.	Pontederiaceae(Pickeral weed family)	<i>Eichhornia crassipes</i>
19.	Salviniaceae(Salvinia family)	<i>Salvinia</i> <i>Azolla</i>
20.	Scrophulariaceae(figwort family)	<i>Limnophila indica</i>
21.	Trapaceae	<i>Trapa bispinosa</i>



Table-10: List of mushroom in university campus

Sl	Family	Botanical Name	Local /common	Edibility
1.	Agaricaceae	<i>Lepiota sp.</i>	Parasol	Some edible
		<i>Leucocoprinus</i>	Plant pot dapperling	Inedilbe
2.	Bankeraceae	<i>Sarcodon inbricatus</i>	Scaly hedgehog	Edible
3.	Bolbitiaceae	<i>Bolbitius titubans</i>		Medicinal
4.	Cortinariaceae	<i>Gymnopilus dilepis</i>		Not known
5.	Coprinaceae	<i>Coprinus sp.</i>	Woolly inky cap	Some species are edible
6.	Dacrymycetaceae	<i>Dacrymyces sp.</i>	Jellyspot	
7.	Entolomataceae	<i>Entoloma</i>	Wood pinkgill	Inedible
9.	Fomitopsidaceae	<i>Fomitopsis streiformis</i>	Bracket fungus	Medicinal
8	Gomphaceae	<i>Ramaria gelatinose</i>	Coral fungus	
		<i>Ramaria Formosa</i>	Coral fungus	
9.	Hygrophoropsidaceae	<i>Hygrophoropsis aurantica</i>	false chanterelle	Edible
10	Hymenogastraceae	<i>Hebeloma crustuliniforme</i>	Poison pie	Inedible
		<i>Psilocybe Mexicana</i>	Magic mushroom	Medicinal
11.	Inocybaceae	<i>Inocybe sp.</i>		Poisonous
12.	Lyophyllaceae	<i>Termitomisis eurhizus</i>		Edible
13.	Meripilaceae	<i>Meripilus giganteus</i>	Giant polypore	Edible
14.	Meripilaceae	<i>Physisporinus vitreus</i>	Crust fungus	Inedible
15.	Polyporaceae	<i>Pycnoporus coccineus</i>		Medicinal
		<i>Lentinus</i>		Edible
		<i>Panus lecomtei</i>	Lilac oysterling	Inedible
		<i>Tremetes versicolor</i>	Turkey tail	Medicinal
		<i>Lentinus sp.</i>		Edible
16.	Physalacriaceae	<i>Hymenopellis megalospora</i>		
		<i>Armillaria sp.</i>	Honey fungi	Some species are edible
17.	Psathyrellaceae	<i>Coprinus</i>	Ink cap	Inedible/edible
		<i>Psathyrella corrugis</i>	Psathyra	Inedible
		<i>Panaeolus sp.</i>		Inedible
		<i>Coprinus atramentaria</i>	Ink cap	Inedilbe
18.	Paxillaceae	<i>Paxillus sp.</i>	Common roll-rim	Some species are edible
19.	Russulaceae	<i>Lactarius friabilis</i>	Milks cap	Inedible/edible
		<i>Rassula sp.</i>	Sickener	Some are edible
		<i>Russula emetica</i>	Sickner	Inedible
20.	Strophariaceae	<i>Agrocybe</i>	Field cap	Inedible/edible
		<i>Hypolomas</i>	Brick cap	Inedible
		<i>Hypholoma</i>	Sulphur tuft	Edible with caution
		<i>Agrocybe sp.</i>	Maple	Some are edible
		<i>Pholiota sp.</i>		
21.	Suillaceae	<i>Suillus sp.</i>	Painted slippery cap	Controversial
22	Tricholomataceae	<i>Conocybe sp.</i>	Woolly inky cap	Some species are edible
		<i>Clitocybe sp.</i>	Waste basket	Few are edible
		<i>Tricholoma sp</i>	Grey knight	Some are edible
23.	Xylariaceae	<i>Xylaria aristata</i>		Inedible
		<i>Xylaria hypoxylon</i>	Dead man finger	Medicinal
		<i>Xylaria polymorpha</i>	Mead man finger	Medicinal
Sl.no	List of wood decaying mushrooms (Macrofungi)			



1.	Agaricaceae	<i>Vascellum pretense</i>	Not known	Not known
		<i>Cystoderma</i>	Saffron parasol	Not known
2.	Auriculariaceae	<i>Exidia glandulosa</i>	Witch's butter	Inedible
3.	Fomitopsidaceae	<i>Daedalia flavida</i> (Lev)		Medicinal
		<i>Poyporus schweinitzii</i>	Velvete top	Medicinal
4.	Ganodermataceae	<i>Ganoderma lucidum</i> (Leyss)karst	Rishi mushroom	Medicinal
5.	Hymenochaetaceae	<i>Inonotus sp.</i>		Medicinal
		<i>Phelinus sp.</i>		Medicinal
		<i>Hymenochaete tabacina</i> (sow)Lev		Medicinal
6.	Hypoxylaceae	<i>Daldinia concentric</i> (Bolt)Ces.and Dev	Coal fungus	Medicinal
7.	Inocybaceae	<i>Crepidotus variabilis</i>		
8.	Polyporaceae	<i>Fomes badius</i> (Berk)	Tinder conk	Medicinal
		<i>Fomes fastuosus</i> (L)Berk.	Tinder conk	Medicinal
		<i>Fomes pinicola</i> fr.	Tinder conk	Medicinal
		<i>Fomes rimosus</i> (berk)cooke	Tinder conk	Medicinal
		<i>Hexagonia apiaria.pers</i>		Medicinal
		<i>Polyporus grammacephalus</i> (berk)		
		<i>Polyporus leoninus</i> .Klotzsch		
		<i>Polystictus hirsutus</i> fr.	Funnel cap	
		<i>Trametes dickinsii</i> (Berk)	Turkey tail	Medicinal
		<i>Trametes spongipellis</i> (Klotzsch)	Turkey tail	Medicinal
		<i>Favolus candensis</i> (Klotzsch)		
		<i>Lenzites palisoti</i> (Fr.)		Medicinal
		<i>Irpex flavus</i> (klotzsch)		Medicinal
9.	Pyronemataceae	<i>Scutellinia scutellata</i>	Eye-lash cup	Inedible
10.	Psathyrellaceae	<i>Phaeolus sp.</i>		Medicinal
11.	Schizophyllaceae	<i>Schizophyllum commune</i> (Fr.)	Split gills mushroom	Medicinal
12.	Stereaceae	<i>Stereum nitidulum</i> (Berk)	False turkey tail	Medicinal
13.	Tricholomataceae	<i>Omphalina campanella</i> (Batch fr.)		
14.	Tremellaceae	<i>Tremella lutescens</i> (Pesson)	Jelly mushroom	Edible/ medicinal
15.				

Table-11: Mushroom diversity surrounding the university campus

S.No.	Family	Mushroom Name	Common Name	Edibility
1.	Agaricaceae	<i>Vascellum pratense</i>	Lawn puff ball	Edible
		<i>Lycoperdon pyriform</i>	Stump puff ball or pear shaped puff ball	Edible
		<i>Lepiota cristata</i>	Stinking parasol.	Poisonous
		<i>Agaricus brassiliensis</i>	Almond mushroom or Royal Sun <i>Agaricus</i> .	Edible
		<i>Macrolepiota rhacodes</i>	Shaggy parasol	Edible but causes allergy with some persons.
2.	Amanitaceae	<i>Amanita citrina</i>	False death cap	Poisonous
3.	Coniophoraceae	<i>Coniophora puteana</i>	Cellar fungus or wet rot fungus	Inedible
4.	Clavariaceae	<i>Clavulina cristata</i>	Crested coral fungus	Less edible
5.	Coprinaceae	<i>Coprinus atramentarius</i>	Common ink cap	Edible
6.	Clavariadelphaceae	<i>Clavariadelphus sp.</i>	Giant club	Edible after cooking.



7.	Entolomataceae	<i>Clitopilus prunulus</i>	Sweet bread	Edible
8.	Ganodermataceae	<i>Ganoderma tsugae</i>	Wood decaying fungus	Inedible
		<i>Ganoderma appalantum</i>	Artist's fungus.	Medicinal
		<i>Ganoderma lucidum</i>		
9.	Geoglossaceae	<i>Microglossum viride</i>	Green earth tongue	Inedible
10.	Geastraceae	<i>Geastrum triplex</i>	Collared earthstar	inedible
11.	Hymenochataceae	<i>Coltricia perennis</i>	Funnel polypore	Poisonous
	Lycoperdaceae	<i>Bovista nigrescens</i>	Dusty puffballs	
		<i>Langermannia gigantean</i>	Giant puff-ball	
12.	Nidulariaceae	<i>Cyathus striatus</i>	Grooved bird's nest fungus	Inedible
13.	Polyporaceae	<i>Fomes fomentarius</i>	Tinder fungus	Inedible
		<i>Tyromyces lacteus</i>	Milk white polypore	Inedible
		<i>Lenzites betulina</i>	Birch lenzitis	Inedible
		<i>Polyporus varius</i>	Varied polypore	Inedible
		<i>Tremets versicolor</i>	Turky tail or varicolored bracket	Medicinal
14.	Psathyrellaceae	<i>Panaeolus sphinctrinus</i>	Grey mottle gills	Inedible
15.	Pleurotaceae	<i>Pleurotus cornucopiae</i>	Oyster cap mushroom	Edible
16.	Strophoriaceae	<i>Hypholoma elongatum</i>	Swamp sulphur cap	Inedible
		<i>Pholiota highlandensis</i>	Charcoal pholiota	Inedible
17.	Serpulaceae	<i>Serpula lacrymans</i>	Dry rot fungus	Inedible
18.	Sparassidaceae	<i>Sparassis crispa</i>	Wood cabbage, cauliflower fungus, brain fungus	Edible
19.	Tricholomataceae	<i>Collybia butyracea</i>	Greasy tough shank	Inedible
		<i>Omphalina ericetorum</i>	Umbrella naval cap	Inedible
		<i>Mycena Leptocephala</i>	Nitrous mycena	Poisonous
		<i>Lepista nuda</i>	Wood blewit	Edible
		<i>Calocybe sp.</i>	Giant puff ball.	Edible
20.	Tremellaceae	<i>Tremella mesenterica</i>	Yellow brain fungus or witches buffer	Inedible
21.	Xylariaceae	<i>Daldinia concentrica</i>	Cramp balls or King Alfred's	Medicinal

Table-12: List of algae found in university and adjoining area

Sl no	Family	Species
1	Chroococcaceae	<i>Microcystis aeruginosa</i> Kutz
		<i>M. flos-aquae</i> (Wittr.)
		<i>Chroococcus limneticus</i> Lemm
		<i>C. minutus</i>
		<i>Coelosphaerium kützingianum</i> Nag
		<i>Gomphosphaeria</i> Kütz.
2.	Dermocarpaceae	<i>Stichosiphon sansibaricus</i>
3.	Oscillatoriaceae	<i>Oscillatoria perornata</i>
		<i>O. sancta</i>
4.	Nostocaceae	<i>Anabaenopsis circularis</i>
		<i>Cylindrospermum stagnate</i>
		<i>Nostoc carneum</i>



		<i>Nostoc muscorum</i>
		<i>Anabaena circumalis</i>
		<i>Anabaena macrospora</i>
		<i>A. fertilissima</i>
5.	Rivulariaceae	<i>Calothrix braunii</i>
		<i>C. brevissima</i>

Table-13: List of Plants lost & Plant introduced in the Botanic Garden from 2016 to 2021

SL	Family	Name of Species
1	Arecaceae	<i>Areca catechu</i>
2	Apiaceae	<i>Centella asiatica</i>
3	Asteraceae	<i>Centratherum punctatum</i>
4	Asparagaceae	<i>Chlorophytum tuberosum</i>
5.	Apocynaceae	<i>Tylophora asthmatica</i>
		<i>Beaumontia grandiflora</i>
6.	Bignoniaceae	<i>Bignonia</i>
7.	Caryophyllaceae	<i>Celosia cristata</i>
8.	Cupressaceae	<i>Juniperus communis</i>
		<i>Taxodium</i>
9.	Euphorbiaceae	<i>Euphorbia trabeculae</i>
10.	Fabaceae	<i>Dalbergia sissoo</i>
11.	Ginkgoaceae	<i>Ginkgo biloba</i>
12.	Lamiaceae	<i>Ocimum</i>
13.	Lauraceae	<i>Cinnamomum tamala</i>
14.	Marsileaceae	<i>Regnellidium diphyllum</i>
15.	Myrtaceae	<i>Syzygium aromaticum</i>
16.	Santalaceae	<i>Santalum album</i>
17.	Solanaceae	<i>Solanum seaforthianum</i>
18.	Verbenaceae	<i>Duranta erecta</i>
		<i>Tactona grandis</i>
19 .	<i>Araucariaceae</i>	<i>Agathis sp.</i>
20 .	<i>Bixaceae</i>	<i>Bixa orellana</i>
21.	<i>Fabaceae</i>	<i>Prosopis cineraria</i>
Years	Introduction of Plants in Botanical Garden and development of Orchards	
2016	Cactus orchard	
2017	Citrus orchard	
2018	Palm Trees, <i>Sterculia urens</i>	
2019	<i>Ficus Krishnae</i>	
2020	<i>Anthocephalus kadamba</i>	
2021	<i>Camellia sinensis</i> , <i>Boswellia serrata</i>	

Table-14: Description of major plants in university campus

1.	Bahera	<i>Terminalia belerica</i> (Gaertn.) Roxb.	Combretaceae	The bark is reportedly used in treating anaemia and leucoderma. Fruits are reported to be effective in curing	A large deciduous tree with thick dark green bark. Leaves 3-8 in. long, alternate, crowded towards the ends of the
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				cough, bronchitis, insomnia, dropsy, dyspepsia, flatulence, vomiting, skin diseases, leprosy, fevers, ulcers and general debility. The mature and dry fruit is constipating and is useful in diarrhea, dysentery and rheumatic swellings. The fruit pulp finds use in ophthalmic.	branchlets, broadly elliptic or obovate, subacute or acuminate, often unequal at the base, coriaceous, glabrous when mature, bract linear caduceus. Flowers about 1/5 in. across. The males usually on upper part of spike, sessile, greenish-yellow, foetid. Calyx teeth triangular, woolly inside. Stamens much exerted. Drupe globose or ovoid, grey tomentose, obscurely angled when dry.
2.	Ber	<i>Zizyphus jujube</i> Lamk.	Rhamnaceae	Pounded leaves are applied on boils; powdered leaves are taken to reduce blood sugar; decoction of the plant is administered orally as a diuretic; and powder of dried fruit is given orally with water to cure diarrhoea.	A shrub or moderate sized tree, almost evergreen usually armed young branches flowers densely tomentose. Leaves variable, 1-4 in. long ovate oblong acute, entire dark green. Flowers greenish yellow. Calyx glabrous within. Petals clawed. Fruit is drupe 1/2 to 3/4 in. or longer globules.
3.	Saaj	<i>Terminalia tomentosa</i> W. & A. Prod.	Combretaceae	The leaves are used as fodder. The bark is used medicinally against diarrhoea. Oxalic acid can be extracted from it. Tannin or dyestuff: The bark and especially the fruit yield pyrogallol and catechol to dye and tan leather. Tree is valuable and commercial source of timber The wood is used for house building, furniture, tool handles, and for underwater	A tall deciduous tree with dark deeply cracked bark. Leaves sub opposite or the upper alternate 5-9 in. long. Flowers sessile, dull yellow. Calyx lobes ovate, acute hairy inside fruit 1-2 in. long with 5 wings 3/4 to 1 in.



				purposes.	
4.	Dho	<i>Anogeissus pendula</i> Edgew.	Combretaceae	The twigs decoction is applied on burn part of the body to clear the spots.	A small gregarious tree with pendulous branches. Leaves $\frac{3}{4}$ to 2 in. long broadly lanceolate. Flower heads under $\frac{1}{4}$ inches in diameter. Ripe fruit nearly orbicular, upper portion & short beak hairy.
5.	Tendu	<i>Diospyros melanoxylon</i> Roxb.	Ebenaceae	Tendu patta leaves are used for wrapping the tobacco and making "beedis" or Indian cigar. The leaf of the tree contains valuable flavones. The pentacyclic triperpines found in leaves possess anti-microbial properties, while the bark shows anti-hyperglycemic activity. The bark of the tree also has significant antiplasmodial effects against <i>P. falciparum</i> .	A medium sized tree with often a very crooked trunk. Bark dark grey or blackish. Leaves alternate & sub apposite 3-8 in. or more in length. Flowers 4-5 merous, white calyx funnel shaped. Fruit globose 1-1 $\frac{1}{2}$ in. in diameter glabrous, smooth, yellow when ripe, pulp sweet.
6.	Safed siris	<i>Albizia procera</i> Benth.	Fabaceae	Gum or resin: when injured, the stem exudes large amounts of a reddish-brown gum that is chemically similar to, and used as a substitute for, gum arabic. Medicine: All parts of the plant are reported to show anti-cancer activity. The roots contain alpha-spinasterol and a saponin that has been reported to possess spermicidal activity. <i>A. procera</i> is commonly used in traditional medicines. A decoction	A tall unarmed quick growing tree with yellowish or greenish white bark. Leaves eventually to pinnate. Rachis 12-18 in. leaflets 6-12 pairs. Flower 3-4 in. across, sessile yellowish white with pale yellow stamens. Calyx glabrous teeth triangular. Corolla $\frac{1}{2}$ in. long. Pod 4-8 in. long reddish brown.



				of the bark is given for rheumatism and haemorrhage and is considered useful in treating problems of pregnancy and for stomach-ache. Leaves are poulticed onto ulcers.	
7.	Gunja	<i>Lannea coromandelica</i> (Houtt.) Merr.	Asteraceae	The tree yields suitable paper pulp. The bark is used for medicinal purposes. Some species yield timber wood used for minor purposes. Some species are of use in medicine.	A medium to tall- sized deciduous tree with spreading canopy, stout branches and smooth grey or whitish bark. Leaves crowded at the end of the branches. Flowers are small, unisexual, yellowish green in colour. Fruit is a single seeded, reniform drupe. Leaves are imparipinnate. Flowers are polygamous or dioecious. Fruit is a compressed drupe.
8.	Arjun	<i>Terminalia arjuna</i> W. & A. Prod.	Combretaceae	Bark is reported to be a cardiac tonic, used in bilious affections, for sores and as an antidote to poisons. Fresh leaves juice is used against earache.	A large tree with a buttressed trunk & smooth grey bark. Leaves 5-8 in. long, sub apposite, elliptic. Fruit 1-2 in. long ovoid or obovoid oblong, with 5-7 hard coriaceous narrow wings marked with ascending striae.
9.	Dhobin	<i>Dalbergia latifolia</i> Roxb.	Fabaceae	Excellent timber. It is useful as stimulant and appetiser and also in dyspepsia, diarrhoea, leprosy, obesity and worms.	A large erect deciduous tree, glabrous in all its parts. Leaves 4-6 in. long. Rachis straight; leaflets 1 ½ to 2 ½ in. long. Flowers whitish, in lax axillary panicles. Calyx teeth obtuse, shorter than the tube. Corolla twice the calyx. Stamen 9. Pod oblong lanceolate 1-4 seeded.



10.	Papara	<i>Gardenia latifolia</i> Ait. Hort. Kew.	Rubiaceae	Gum is antispasmodic, anthelmintic and reported useful in cases of splenomegaly, foul ulcers, wounds and obesity. Also used inveterinary medicine to keep off flies from sores.	A small unarmed tree with stout branches. Leaves apposite or in whorls of tree, sub sessile 4-8 in. long broadly elliptic. Flowers large solitary or in pairs, hairy. Corolla tube 2-3 in. long pubescent outside. Fruit 1-2 in. in diameter.
11.	Kachnar	<i>Bauhinia racemosa</i> Lam.	Fabaceae	The bark of this medicinal plant is highly astringent, leaves are anthelmintic and seeds are anti-bacterial.	A small crooked tree, with thick rough brownish bark & drooping branches. Leaves 1 ½ to 2 in., broader than long. Petals oblanceolate, pale yellow. Stamen 10, all perfect. Pod stalked, 6-12 in. by ½ to 1 in. wide.
12.	Babool	<i>Acacia nilotica</i> (L.) Willd. ex. Dell	Fabaceae	Acacia gum, coconut fruit and sugar mixed with half teaspoon ghee applied twice a day on pregnant lady after delivery to cure good health for pregnant lady and her child. Gum, dissolved in equal parts alcohol and water and can be used for inflammatory conditions of the respiratory, digestive and urinary tract. It is also useful in diarrhoea (sic) and dysentery. Its bark has been used in wide range of folk treatments, including tuberculosis and leprosy. There is no part of the <i>A. nilotica</i> that went to waste.	A medium sized evergreen tree with dark brown bark. Branchletes finely gray-downy leaves 1 -2 in. long; rachis downy with several glands. Flowers yellow, fragrant. Calyx minute companulate. Corolla twice the calyx. Pods usually solitary, 3-6 in. long. Seeds 8-12, in a single row.
13.	Kaker	<i>Flacourtia ramontchi</i>	Bixineae	This plant has been reported as an answer for the treatment of a	A small spinous tree or shrub. Leaves very variable, elliptic-oblong,



		L'Herit.		variety of diseases and functional disorder. Fruits are used as appetizing, diuretic, digestive, in jaundice and enlarged spleen. Barks are used for the treatment of intermittent fever. Roots are used in nephritic colic and gum is used in cholera.	obovate. Flowers dicecious, in short branched, glabrous or hairy racemes.
14.	Kaim	<i>Mitragyna parvifolia</i> Korth.	Rubiaceae	Plant pacifies vitiated vata, kapha, internal or external hemorrhages, muscle pain, skin diseases, fever, inflammations, infections and fever. Root, bark and leaves of the plant are used.	A medium to large sized deciduous tree grows up to 25 meters in height. Leaves simple, opposite, elliptic, cordate of obovate, acute or acuminate, glabrous on both sides. Flowers greenish yellow fragrant in globose heads. Fruits oblong capsules.
15	Peepal	<i>Ficus religiosa</i> L.	Moraceae	The bark of this plant is cooling and astringent, and is useful in inflammations and glandular swellings of neck. Root bark is good for stomatitis, clean ulcers and it is astringent in leucorrhoea and promotes granulations. Root bark is aphrodisiac. Roots are said to be good for gout. The roots are chewed to prevent gum disease. The fruit is laxative, promotes digestion, aphrodisiac and checks vomiting. The powdered fruit is taken for asthma. Seeds are useful in urinary troubles. The leaves alone are used to	Peepal is a large deciduous tree. Leaves are heart shaped. Tree has large crown with the wide spreading branches. The fruits are hidden with the figs. The figs which contain the flowers grow in pairs just below the leaves and look like the berries. Its bark is light gray and peels in patches. Its fruit is purple in color.



				treat constipation. The leaves and young shoots together are purgative (strong laxative). An infusion or decoction of the bark is used with some honey for the treatment of gonorrhoea, ulcers, skin diseases and scabies. Its power bark has been used to heal the wounds for years.	
16.	Mahaneem	<i>Ailanthus excelsa</i> Roxb.	Simaroubaceae	The aromatic and bitter bark and leaves are used medicinally, and the wood is used for light articles.	A tree, 60-80 feet high. Leaves 1 foot or more glandular hairy. Flowers yellowish, in large lax often much – branched panicles
17	Bael	<i>Aegle marmelos</i> Linn.	Rutaceae	The pulp of the ripe fruit is largely eaten as food, or diluted with water, it makes a refreshing drink. The root bark and leaves are also used medicinally. The good gum exerts from the stems, and dye is prepared from the rind of the fruit. The shells of the smaller fruits are largely used as snuff-boxes. Amongst Hindus the bael is considered one of the most sacred of Indian trees.	Small deciduous glabrous tree; spines 1 in. long, strong, straight axillary. Flowers 1 ¼ inches across, greenish white sweet scented; pedicle and calyx pubescent. Filaments sometimes fascicled. Fruits 2 to 7 inches in diameter, globose, oblong or pyriform. Rined grey or yellow. Pulpy orange coloured sweet.
18	Jamrasi	<i>Elaeodendron glaucum</i> Roxb.	Celastraceae	The root is said to be specific against snake bite and the bark is leaves are used medicinally. The handsome reddish coloured wood is much valued as it works well and takes a fine polish.	Usually a moderate size tree, with numerous often reddish branches. Leaves 2 to 6 inches long, on petioles ½ to 1 inch long. Stipules small, deciduous. Peduncles longer than the petioles, branches divaricate. Calyx lobes broad, obtuse. Petals



					oblong, yellowish brown edged with white.
19	Kaari	<i>Saccopetalum tomentosum</i> H F. & Thoms.	Menispermaceae	Leaves of the tree are used as fodder.	Large tree young branches tomentose. Leaves 6 to 12 inches long, shortly petiolate. Flower 1 in. in diameter. Leaf opposed or sub terminal, solitary or in pairs. Sepals and outer petals are minute. Inner petals much larger.
20	Amaltas	<i>Cassia fistula</i> Linn.	Fabaceae	This tree is known as disease killer. The root is considered a very strong purgative, and self-medication. The purgative action is probably due to abundant 1,8-dihydroxyanthraquinone and derivatives thereof.	A medium sized tree with thick yellowish or greenish grey bark. Leaves 8 to 16 inches long. Leaflets 4 to 8 pairs. Flowers bright yellow in long axillary peduncles lax racemes 1 to 2 feet long. Calyx five partite. Pod cylindric pendulous, 1 to 2 feet long and about 1 in. in diameter. Seeds flat embedded in soft black sweetish pulp.
21.	Khair	<i>Acacia catechu</i> (L.) Willd., Oliv.	Fabaceae	Kattha, an extract of its heartwood, is used as an ingredient to give red color and typical flavor to paan. Branches of the tree are quite often cut for goat fodder and are sometimes fed to cattle. A wood extract called catechu is used against the throat infections cough, diarrhoea, chronic ulceration, epistaxis and eruptions of the skin, leprosy, leucoderma and wounds. It is also useful in treating anaemia, diabetes, inflammations	A moderate size tree with thorny branches and rough dark coloured bark. Branchlets glabrous, shiny. Stipular spines in pairs, short recurved, dark coloured shining. Rachis pinnae and at the insertions of the three upper most pairs. Pinnae 20 to 40 pairs; leaflet 30 to 50 pairs. Flowers sessile, pale yellow. Corolla hairy, 2 to 3 times longer than tomentose calyx. Pod 2 to 3 inches, stalk, straight, dark brown 5 to 6 seeded.



				and intermittent fever.	
22.	Seja	<i>Lagerstroemia parviflora</i> Roxb.	Lythraceae	A sweet edible gum exerts from the bark. The inner bark yields a fibre, and the bark and leaves are used in tannins. The hard, tough and elastic wood is largely employed for ploughs, boats etc. and it is said to yield good charcoal.	A large tree with smooth ash coloured bark. Leaves 2 to 3 inches, opposite shortly stalk. Flowers ¼ inches across, in few or many flowered axillary panicles. Fragrant. Calyx glabrous or pubescent. Petals less than ¼ inches, white. Seeds ½ inches or more long.
23	Mahua	<i>Madhuca latifolia</i> Roxb.	Sapotaceae	It is generally valued for its sweet succulent corolla, which are eaten either raw or cooked, or made in to sweetmeats. A coarse kind of spirit is also distilled from the flowers. The fruit is eaten, and from it is extracted an oil, which is used for soap making as well as for burning and cooking. The oil cake is used for poisoning fishes. The heart wood is of very good quality but owing to the value of the flower and fruits, the tree is very seldom felled.	A large deciduous tree. Bark grey or blackish with shallow transverse wrinkles and vertical cracks. Branches many spreading, forming a close symmetrical head. Leaves clustered at the end of the branches, 5 to 9 inches long. Flower in cluster at the end of the branches. Calyx 5/8 inches, divided nearly to the base. Densely tomentose. Corolla about 2/3 inches long, cream coloured. Fruits berry, 1 to 2 inches long, fleshy, ovoid greenish, 1 to 4 seeded.
24.	Kusum	<i>Schleichera oleosa</i> Willd.	Sapindaceae	It is cultivated in gardens and as a roadside tree. The wood is hard, strong and durable, and is much valued; a lac of superior quality is yield by this tree. The oil obtain from the seeds is used for burning and also medicinally. Its leaves are used as fodder.	A large handsome tree with peripinnate leaves. Young parts downy. Leaflet 2 to 4 pairs, opposite, 2 to 9 inches long, sessile. Racemes axillary, often several on short branchlets. Flowers yellowish green, male and 2-sexual often on different trees. Fruit ¾ to 1 inches long pointed, smooth or



					echinate.
25.	Ghont	<i>Zizyphus xylopyra</i> Willd.	Rhamnaceae	The bark is used as tanning agent in company with the leaves of <i>Woodfordia fruticosa</i> . The fruit is not edible, but the kernels are sometimes eaten. The young shoot and leaves are given to cattle and goats. The bark is charred fruit are used to give a black dye to leather.	A large straggling deciduous shrubs or small tree. Leaves 1-3 ½ inches long, broadly elliptic, obovate or orbicular, obliquely rounded or subcordate at the base. Flowers in axillary compact shortly peduncle cymes. Calyx glabrous in side. Petals reflexed. Fruit is drupe globose ½ -1 in. diameter 3 celled, 3 seeded, dry and hard, grey – tomentose when young.
26.	Doodhi	<i>Holarrhena antidysenterica</i> Wall.	Apocynaceae	The soft white wood is largely used especially for carving and in turnery, and many of the beads worn round the neck as a charm are made from this wood. The bark is used for dysentery, and the leaves and seeds are also employed medicinally.	Small deciduous tree, with brown bark. Leaves sessile or nearly so, glabrous or more or less tomentose, 3 to 6 inches long. Flowers white, inodorous, arrange in terminal sessile. Calyx lobes long, lanceolates, acuminate, ciliat. Corolla about 1 in. long, throat without a ring of hairs. Follicle slender, 8-15 in. long. Seeds linear, about ½ in. long brown, about twice as long as the seed.
27.	Chironji	<i>Buchanania lanzan</i> Roxb.	Anacardiaceae	The kernel, which contains a sweet and wholesome oil, is much used in sweetmeats. The bark is used for tanning; a pellucid gum exudes from the stems, which is employed medicinally and for other purposes. The heartwood seasons well and is much valued	A moderate sizes sub deciduous tree. Leaves 6-10 in. long, broadly oblong, rounded at the apex, coriaceous and hard, reticulate on both surfaces, usually pubescent beneath. Flowers crowded, 1/4 in inch diameter greenish white. Calyx 5 tooth. Petals oblong. Carpel's 5, hairy, one perfect, the others reduced to filaments.



28.	Aonla	<i>Embilica officinalis</i> Gaertn.	Euphorbiaceae	The acid fruit is eaten as a pickle, and the bark leaves and fruit are used in dyeing and tanning. The hard red wood is valued for poles and being durable under water, it is much used for well work. Excellent charcoal is prepared from it. It is said that chips of the wood thrown into muddy water will clear it effectually.	A moderate sized deciduous tree with usually a crooked trunk; bark light grey or greenish, peeling off in small irregular patches, red inside. Branches spreading, branchlet glabrous or finely pubescent. Leaves small, subsessile, distichously arranged along the branchlets and thus simulating the leaflets of a pinnate leaf. Flowers greenish yellow, arranged in axillary fascicles on the leaf bearing branchlets or on the naked portion below the leaves. Sepals 6, oblong, obtuse. Fruit fleshy, globose, pale yellow and often tinged with pink when ripe, about ½ in. in dia. Obscurely 6 lobed, breaking up when dry into three, 2 seeded crustaceous cocci. Seed 6, trigonous.
29.	Umar	<i>Ficus racemosa</i> L.	Moraceae	Roots of the tree are useful in hydrophobia whereas bark is acrid, cooling, galactagogue and good for gynaecological disorders. Fruits are astringent to bowels, styptic, tonic and useful in the treatment of leucorrhoea, blood disorders, burning sensation, fatigue, urinary discharges, leprosy, menorrhagia, epistaxis and intestinal worms. Bark is useful in asthma and piles. Latex	The tree is medium tall with quite rich green foliage that provides good shade. The leaves are dark green, 7.5 to 10 cm long, ovate or elliptic. The fruit receptacles 2 to 5 cm in diameter, pyriform, in large clusters, arising from main trunk or large branches. The fruits resemble the figs and are green when raw, turning orange, dull reddish or dark crimson on ripening. The seeds tiny, innumerable, grain-like, the outer surface of the



				is applied externally on chronic infected wounds to alleviate edema, pain and to promote the healing.	bark consists of easily removable translucent flakes grayish to rusty brown, uniformly hard and non-brittle.
30	Chirol	<i>Holoptelea integrifolia</i> Planch.	Ulmaceae	The bark of the tree is used in rheumatism. Seed and paste of stem bark is used in treating ringworm. Bark and leaves are used for treating oedema, diabetes, leprosy and other skin diseases, intestinal disorders, piles and sprue.	A medium to large sized glabrous deciduous tree grows up to 30 meters in height. Bark whitish yellowish grey; exfoliate with regular intervals and with offensive smell when cut. Leaves simple alternate, elliptic, entire glabrous with cordate base. Flowers greenish yellow. Male and bisexual flowers mixed in short racemes near leaf axils. Fruits are sub orbicular samara with membranous wings.
31	Bakain	<i>Melia azedarach</i> L.	Meliaceae	The main utility of this tree is its timber. This is of medium density, and ranges in color from light brown to dark red. In appearance, it is readily confused with the <i>Tectona grandis</i> . The taste of the leaves is not as bitter as neem. The hard, 5-grooved seeds were widely used for making rosaries and other products requiring beads, before their replacement by modern plastics.	A small to medium deciduous tree attaining a height of 5 to 15 meter and a stem diameter of 110 cm. An attractive shade tree with a high lateral branching. Hardy and drought resistant. Ferny foliage turning yellow in autumn. Leaves are dark green on the upper surface and paler underneath. They emit a punfent smell when crushed. Flowers are purple and fragrant. Fruits or berries are yellow, nearly round, smooth and as hard as a stone, containing 4 to 5 black seeds.
32.	Kaitha	<i>Limonia acidissima</i>	Rutaceae	The bark yields a valuable gum	A small deciduous glabrous tree, armed with



		Linn.		resembling gum-arabic. The pulp of the fruit is used medicinally, and also as a food adjunct. The hard dry shells of fruits are used as snuff-boxes.	strong straight axillary thorns. Bark dark grey or nearly black, wrinkled, and with longitudinal shallow furrows. Leaves smelling of aniseed; leaflets 5-7, cuneate or obovate tip crenate. Flowers ½ in across, pale green stained with red. Fruit about the size of a tennis ball.
33	Katjamun	<i>Eugenia heyneana</i> Duthie	Myrtaceae	The fruit is eaten.	A small tree or shrub. Leaves 3-5 in. long, shortly petioled, narrowly lanceolate or elliptic, obtusely acuminate finely and closely nerved. Panicles laxly branched; usually lateral from the axils of fallen leaves. Calyx-lobes unequal. Petals united, concave, white. Fruit 1/3 in. long, oblong, crowned by the cup like calyx limb.
34.	Reonja	<i>Acacia leucophloea</i> Willd.	Fabaceae	The barks of this tree are used in medicine as an astringent, a bitter, a thermogenic, a styptic, a preventive of infections, an anthelmintic, a vulnerary, a demulcent, an expectorant, an antipyretic, an antidote for snake bites and in the treatment of bronchitis, cough, vomiting, wounds, ulcers, diarrhea, dysentery, internal and external hemorrhages, dental caries, stomatitis, and intermittent fevers and skin diseases. The gum yielded by this	A medium sized grey tomentose thorny tree. Spines ¼ 1 in. long. Leaf rachis downy; pinnae 6-12 pairs, 1-1 ½ in. long. Leaflets 15-30 pairs. Bract 2 at about the middle of each pedicel. Corolla very small, pale yellow or almost white. Pod 4-6 in. long, narrowly ligulate, curved, sub-indehiscent, clothed with persistent pale-brown or grey tomentum, 8-12 seeded, sutures not indented.



				plant is used in native medicines, and the leaves and bark are used in dyeing; the fibre obtained from the bark is made into ropes and fishing nets; the young pods and seeds and even the pounded bark mixed with flour are eaten in times of scarcity. The wood is used chiefly for posts and fuel. The reddish brown heartwood is extremely hard, strong and tough, but it is liable to split in the form of planks. The bark, which contains much tannin, is largely used in the preparation of sprits from sugar and palm juice.	
35	Haldu	<i>Adina cordifolia</i> Hook. f.	Rubiaceae	A handsome shade giving tree. The hard reddish brown wood is much prized by native wood carvers; it is also largely used for making furniture and agricultural implements.	A large tree, its trunk usually buttressed at the base. Branchlets leaves beneath and petioles pubescent. Leaves petioled, deciduous, 4-9 in. in diam. Petiole stout, about half the length of the leaf. Calyx lobes clavate. Corolla dilated above downy outside, lobes recurved.
36.	Kala siris	<i>Albizia lebbeck</i> Benth.	Fabaceae	<i>A. lebbeck</i> is an astringent, also used by some cultures to treat boils, cough, to treat the eye, flu, gingivitis, lung problems, pectoral problems, is used as a tonic, and is used to treat abdominal tumors. The bark is used medicinally to treat	A large unarmed deciduous tree, with grayish bark. Leaves evenly 2 pinnate; rachis 3-9 in. long. Pinnae 2-3 pairs, 4 inches long; leaflets 5-9 pairs, subsessile, 1-2 in. long. Flower 1¼ inches across white, fragrant. Calyx about 1/5 in. ; teeth short,



				inflammation. <i>A. lebbbeck</i> is also psychoactive. The dark brown heartwood is tough and durable, and is used for a variety of purposes. The leaves afford excellent fodder, and the tree is in some places cultivated for this purpose. A pellucid gum exudes from cracks in the bark.	deltoid. Corolla twice as long as the calyx. Pod 4-12 in. long by 1-2 in. broad, linear- oblong, blunt at both ends, flat compressed, smooth and glossy. Seeds 4-12, pale brown.
37	Kumbhi	<i>Careya arborea</i> Roxb. Hort.	Lecythidaceae	The tree yields a brownish gum. The bark is used in tanning, and various parts of the tree are medicinal. Coarse cordage and sacks are made from the inner bark. The reddish heartwood seasons well, and is hard, durable and elastic; it is used chiefly for agricultural implements.	A large deciduous tree with dark-grey bark. Leaves 6 to 12 inches long, shortly stalked, oblong or orbicular. Flowers 3 to 4 inches across few together in spikes at the end of the branches. Calyx $\frac{3}{4}$ to 1 inch; tube campanulate, obscurely pubescent; lobes ovate, obtuse, imbricate. Petals $1\frac{3}{4}$ in. long, elliptic, obtuse, white, caduceus. Fruit globose, 2-3 in. diam. Crowned by the persistent calyx segments and remains of the long slender style.
38.	Kullu	<i>Sterculia urens</i> Roxb.	Sterculiaceae	The inner bark yields a strong fibre; a white gum exudes from the bark, and the seeds are some time eaten roasted.	A moderate sized soft wooded tree, 30 to 50 ft. high. Outer bark peeling off like paper, whitish tinged with pink. Leaves 8-12 in. long, crowded at the ends of the branches, palmately 5- lobed, glabrous above, tomentose beneath, cordate. Flowers greenish yellow, mostly male. Calyx campanulate, 5 parted; lobes acute, spreading, glandular



					inside at the base. Folicles 5, spreading woody, densely pubescent and armed with stiff stinging bristles, red when ripe. Seeds oblong, dark brown.
39.	Karanj	<i>Pongamia pinnata</i> (L.) Pierre	Fabaceae	The seed yields valuable medicinal oil, and the leaves and roots are also used medicinally. The leaves are given as fodder to cattle. The wood is white, turning yellow on exposure, not durable.	A moderate sized glabrous almost evergreen tree. Bark soft, grayish-green. Leaves 8 to 10 inches long pale green; leaflets usually 5 to 7, oblong or ovate, obtuse. Flowers in simple peduncle axillary racemes nearly as long as the leaves. Calyx widely campanulate, mouth truncate. Corolla ½ in. or less, white tinged with violet or pink. Seeds white, marbled with brownish lines.
40.	Maahuli	<i>Bauhinia variegata</i> Linn.	Fabaceae	The bark is used for dyeing and tanning, and from the inner portion a fibre is prepared. The bark and leaves are medicinal. The flowers bud are eaten as a potherb or pickled, and the foliage is given to cattle as fodder.	Very similar in habit to the preceding. Leaves rather broader than long, 4-6 in. across, usually deeply cordate. Flowers few, large, fragrant, arranged in lateral corymbs. Calyx tube ¾ in. long. Petal about 2 in. long usually four of them white, and the upper one red and veined with purple, or all of them red dish with the upper one more deeply colored and variegated with cream and purple.
41	Jamun	<i>Syzgium cumini</i> (L.) Skeels.	Myrtaceae	The tree is extensively cultivated for its fruit, which is largely eaten by natives either raw or pickled. It is astringent and rather acid. Various	A medium sized tree with smooth grey bark. Leaves 2 ½ to 4 inches long, rotund ovate to oblong, bluntly acuminate, both surfaces turning brown



				parts of the tree are medicinal, and the bark is used in dyeing and tanning, the wood is durable, and as it resists the action of water it is used very often in the construction of wells. The tree is considered sacred by Hindus.	when dry. Flowers many, sessile, 2/5 in. across, white. Calyx campanulate, suddenly contracted in to a stout pseudo stalk. Petals 4, orbicular, calyptrate. Fruit oblong or ovoid-oblong, sometimes as large as an olive, dark-purple, juicy, 1 seeded.
42	Katai	<i>Flacourtia indica</i> (Burm. f.) Merr.	Flacourtiaceae	This plant has been reported as an effective remedy for the treatment of a variety of diseases. Fruits are used as appetizing and digestive, diuretic, in jaundice and enlarged spleen. Barks are used for the treatment of intermittent fever. Roots are used in nephritic colic and gum is used in cholera.	This is a bushy tree with a spiny trunk and branches. Plants are very attractive, with deep green glossy leathery leaves. The drooping branches bear oval leaves. The seeds are dispersed by the birds.
43.	Akola	<i>Allangium salvifolium</i> Lam.	Allangiaceae	The dried leaves have traditionally been used to treat various ailments in Asia. It is a popular folk medicine and has been studied for its anti-inflammatory, antimicrobial, antifertility and cardiotonic activities. Traditionally <i>A. salvifolium</i> bark have been reported to exhibit a variety of biological activities, including antidiabetic, anticancer, diuretic, anti-inflammatory, antimicrobial, laxative, and antiepileptic activity.	A shrub or small tree with grey bark, leaves 3 to 6 in., alternate, oblong or elliptic. Petiol ¼ inches, rusty tomentose. Flowers solitary or fascicled white, fragrant. Calyx-teeth minute. Petals usually 6 to 7, lanceolate, woolly outside.



44	Semal	<i>Bombax ceiba</i> Linn.	Malvaceae	The spines of semal are used as antifungal gum, which is known as "mocharus". Fruits yield slick cotton, used in stuffing mattresses and pillows. Its gum has aphrodisiac, astringent, demulcent, haemoptysis of pulmonary tuberculosis and influenza, malaena and menorrhagia and acute dysentery with beneficial results. Flowers are used for haemorrhoids. Root has stimulant, tonic and aphrodisiac properties.	The tree grows to an average of 20 to 60 meters. The trunk bears numerous conical spines particularly when young. Leaves palmate with about 6 leaflets radiating from a central point, an average of 7 to 10 cm wide, 13 to 15 cm in length. The leaf's long flexible petiole is up to 20 cm long. Flowers cup-shaped, solitary or clustered, axillary or sub-terminal, fascicles at or near the ends of the branches. Petals up to 12 cm in length; Calyx is cup-shaped usually 3 lobed, an average of 3 to 5 cm in diameter. Staminal tube is short, more than 60 in 5 bundles. Stigma is light red, up to 9 cm in length. Ovary is pink, 1.5 to 2 cm in length, with the skin of the Ovary covered in white silky hair at 1 mm long. Seeds are numerous, long, ovoid, black or gray in color and packed in white cotton. The fruit is light-green in color in immature fruits, brown in older in mature fruits.
45.	Aam	<i>Mangifera indica</i> L.	Anacardiaceae	Pharmacologically active flavonoid is extracted it's from leaves and bark. Mangiferin has strong antioxidant capacity. It has a number of pharmacological actions and possible health benefits. These include antidiabetic, antioxidant, antifungal, antimicrobial, anti-inflammatory, antiviral, hepatoprotective, hypoglycemic, anti-allergic and anticancer activity. In ayurveda, one of its uses is	A large evergreen tree. Bark thick, dark grey, nearly black, rough with numerous small fissures and exfoliating scales. Leaves alternate, simple, crowded at the ends of the branches, 6 to 12 by 1 ^{1/2} to 4 inches, oblong or obovate, lanceolate, entire coriaceous, dark-green, glabrous, margins often wavy. Inflorescence a terminal panicle about 1 ft. long. Flowers small about 1/6 in. across,



				clearing digestion and acidity due to pitta (heat).	yellowish-green, scented, male and 2-sexual on the same panicle. Calyx 4 to 5 partite, deciduous. Petals 4 to 5, with thickened longitudinally nerves. Stamens 4 to 5, inserted on the disk, one only perfect much longer than the other. Ovary sessile, 1-celled, oblique; ovule 1. Drupe 2 to 6 inches long, ovoid, laterally compressed, with a protuberance on one side near the tip, indicating the position of the style; the shell enclosing the kernel, fibrous.
46	Bargad	<i>Ficus benghalensis</i> L.	Moraceae	It is planted for soil conservation. Its timber is used for well-curbs, furniture etc. Its bark is suitable for paper pulp. Its leaves lopped for fodder and fruits are used to prepare sharbat traditionally.	Very large, fast growing, evergreen tree, with spreading branches and many aerial roots. Leaves stalked, ovate-cordate, 3 nerved, entire, when young downy on both sides; petiole with a broad smooth greasy gland at the apex, compressed, downy. Fruit in axillary pairs, the size of a cherry, round and downy. Tree propagates through seeds, transplanting and stem-cutting.
47.	Salai	<i>Boswellia serrata</i> Triana & Planch.	Burseraceae	It is popular for avenue plantations in India. The wood is a good fuel. Charcoal made from it is particularly favored for iron smelting. <i>B. serrata</i> has recently come into prominence as a raw material for paper pulp and newsprint. Experiments	The tree is of moderate to large size, deciduous; branches spreading and somewhat drooping. Usually has a short bole, 3 to 5 meter in height, sometimes can be taller, if grown in a fully stocked forest. Bark is very thin, greyish-green, ashy or reddish in Leaves



				show that writing and printing papers of suitable strength can be prepared when 25 to 40% bamboo pulp is mixed. Its wood is used in cheap furniture, mica boxes, packing cases, cement barrels, well construction, water pipes, matches, plywood and veneers. The salai guggal gum is used as a diaphoretic, anti-inflammatory and astringent. The tree yields a yellowish-green gum-oleoresin known as salai guggal from wounds in the bark. This gum has an agreeable scent when burnt. The gum is called the Indian frankincense and used in medicines, perfumery and for scented fumes, used for incensing and freshening the air. Gum is used in medicine against rheumatism. It is used as thickener in paints and varnishes.	alternate, exstipulate, imparipinnate, 20 to 45 cm long, crowded towards the ends of branches; leaflets 17 to 31 cm, opposite, 2.5 to 8 cm x 0.8 to 1.5 cm, basal pairs often smallest, sessile, lanceolate or ovate-lanceolate, crenate, very variable in size.
48.	Neem	<i>Azadirachta indica</i> A. Juss.	Meliaceae	The species has several uses ranging from products and services such as food for humans and fodder for animals, charcoal, timber, gum or resin, oil and medicinal as well as for shade and ornament in urban areas. The species is said to be poisonous due to Azadirachtin which has been identified as <i>A. indica</i> 's principal active	Neem is a small to medium-sized tree, usually evergreen, up to 25 meter tall, with a round, large crown up to 10 to 20 meter in diameter; spreading branches; branchless bole for up to 7.5 meter, up to 90 cm in diameter, sometimes fluted at base; moderately thick bark, with small, scattered tubercles, deeply fissured



				compound. Extracts can be made from leaves and other tissues, but the seeds contain the highest concentrations of the compound. People use the twigs as toothbrushes, and dentists find twigs effective in preventing periodontal disease. Neem oil is a powerful spermicidal and can therefore be used as an inexpensive birth control method. A Neem oil-based product, Sensal, is being marketed in India as an intravaginal contraceptive. Neem oil has been used traditionally as a topical treatment for skin symptoms in both humans and livestock, but it should not be ingested orally.	and flaking in old trees, dark grey outside and reddish inside. Leaves are alternate, crowded near the end of branches, light green, with 2 pairs of glands at the base, otherwise glabrous. Flowers are white, bisexual or male on same tree, actinomorphic, small and slightly sweet scented. The fruit 1 to 2 seeded drupe, greenish, greenish-yellow to yellow or purple when ripe.
49.	Amrood	<i>Psidium guajava</i> Linn.	Myrtaceae	<i>P. guajava</i> is grown for its fruit which upon ripening, the guava becomes soft and juicy. It may be eaten fresh, made into a juice or nectar contain fruit pulp, or made into preserves, jam, jelly, or paste. Guava is an excellent source of C vitamin. Its wood can be used to make poles, fence-posts and tool handles, in handicrafts and for charcoal and firewood.	A small evergreen tree. Bark smooth, thin, greenish-grey, peeling off in thin flakes. Leaves elliptic-oblong, nearly glabrous above, pubescent beneath; blade 4 to 6 inches long, petiole 1/4 to 1/6 inch long. Flowers white, 1^{1/2} inches across, peduncles axillary 1 to 1^{1/2} inches long, 1 to 3 flowered. Calyx-limb undivided in bud separating valvate into 4 to 5 lobes when in flower. Petals 4 or 5, free, broad, 1/2 in. diameter. Stamens many. Ovary 2 or more-



					celled with many ovules in each cell. Fruit globose or pear-shaped, edible; seeds numerous.
50.	Imli	<i>Tamarindus indica</i> Linn.	Fabaceae	The fruit pulp of the tree is edible. The hard green pulp of a young fruit is considered by many to be too sour and acidic, but is often used as a component of savory dishes, as a pickling agent. The ripened fruit is considered the more palatable, as it becomes sweeter and less sour as it matures. It is used in desserts as a jam, blended into juices or sweetened drinks. The wood is a bold red color. Due to its density and durability, tamarind heartwood can be used in making furniture and wood flooring. Tamarind trees are used as ornamental, garden and cash crop plantings.	A large evergreen tree. Bark dark-grey, with longitudinal fissures and horizontal cracks. Leaves abruptly pinnate. Leaflets 10 to 20 pairs, opposite, linear-oblong, obtuse, often emarginate, sub-coriaceous, with intra-marginal nerves. Flowers in few flowered, lax, terminal racemes. Petals only three upper developed which are under ¹ / ₂ inch long, pale-white, variegated with red stripes, the middle one hooded, the two lower reduced to scales. Stamens monadelphous, only 3 developed, the others reduced to mere bristles at the top of the sheaths. Ovary many-ovuled, stalk adnate to the calyx-tube. Pod 3 to 8 by 3/8 to 1 inch oblong, slightly compressed, usually flaccid, 3 to 10 seeded, indehiscent with a crustaceous, brittle epicarp, which ultimately cracks irregularly; sutures indistinct. Seeds 1/2 inch diameter, compressed, with a dark-brown or black, hard, smooth, shining testa, imbedded in a brown pulp.
51.	Lasoda	<i>Cordia dichotoma</i> G. Forst.	Boraginaceae	The immature fruits are pickled and are also used as a vegetable fodder. The leaves also	<i>C. dichotoma</i> is a small to moderate-sized deciduous tree with a short bole and



				yield good fodder. The seed kernel has medicinal properties. It is often cultivated for its fruits throughout the range of its natural distribution.	spreading crown. The stem bark is greyish brown, smooth or longitudinally wrinkled. Flowers are short-stalked, bisexual, white colored which opens only at night. The fruit is a yellow or pinkish-yellow shining globose which turns black on ripening and the pulp gets viscid.
52.	Kathal	<i>Artocarpus heterophyllus</i> Lam.	Moraceae	It can be eaten unripe (young) when cooked, or ripe uncooked. The seeds may be boiled or baked like beans. The wood of the tree is used for the production of musical instruments. Hardwood from the trunk is carved out to form the barrels of drums. It is also used to make the body of the Indian string instrument Veena and the drums maridangam and Kanjira; the golden yellow-colored timber with good grains is used for building furniture and house construction.	It is a medium-size evergreen tree typically reaching 8 to 25 meter (26 to 82 ft) in height that is easily recognized by its fruit, the largest among cultivated plants. The succulent, aromatic, and flavorful fruit is eaten fresh or preserved in myriad ways. The fruit of the tree is largest tree-borne fruit, reaching as much as 80 pounds (36 kg) in weight and up to 36 inches (90 cm) long and 20 inches (50 cm) in diameter.
53.	Safeda	<i>Eucalyptus globulus</i> Labill.	Myrtaceae	The uses of <i>Eucalyptus</i> are very vast and wide-ranging. Eucalyptus has been used for insect repellent, respiratory infections and mouth washes. The timber of the tree can be used in construction, fence posts and poles. The leaves are steam distilled to extract eucalyptus oil. The tree is the primary source of global eucalyptus oil. The oil has therapeutic,	The bark sheds often, peeling in large strips. The broad juvenile leaves are borne in opposite pairs on square stems. They are about 6 to 15 cm long and covered with a blue-grey, waxy bloom, which is the origin of the common name "blue gum". The mature leaves are narrow, sickle-shaped and dark shining green. They are arranged alternately on rounded stems and range from 15 to 35 cm in length. The buds are top-shaped, ribbed and warty and have a flattened operculum (cap on the



				perfumery, flavoring, antimicrobial and biopesticide properties.	flower bud) bearing a central knob. The cream-colored flowers are borne singly in the leaf axils and produce copious nectar that yields a strongly flavored honey. The fruits are woody and range from 1.5 to 2.5 cm in diameter.
54.	Rori	<i>Mallotus philippensis</i> Muell.	Euphorbiaceae	According to ayurveda, leaves are bitter, cooling and appetizer. Fruit is heating, purgative, anthelmintic, vulnerary, detergent, maturant, carminative, alexiteric and useful in treatment of bronchitis, abdominal diseases, spleen enlargement etc. <i>M. philippensis</i> is used to produce red dye and herbal remedies. The dye is used in coloring silk and wool. As anti-oxidant for ghee and vegetable oils. Oil is used as hair-fixer and added in ointment. Seed oil is used in paints and varnishes. Seed cake is used as manure. Wood pulp is suitable for writing and printing paper.	Tree having height up to 10 meters. Leaves articulated, alternate, rusty-tomentose, ovate or rhombic ovate. Flowers dioecious, female flowers in lax spike like terminal and axillary racemes; male flowers three together in the axils of small bracts. Capsule trigonous-globular, covered with a bright crimson layer of minute, easily detachable reddish powder.
55.	Baans	<i>Dendrocalamus strictus</i> Nees	Poaceae	This species is one of the two most important bamboos in India. It is found suitable for reclamation of ravine land. It is extensively used as raw material in paper mills and also for a variety of purposes such as construction, agricultural implements, musical instruments, furniture etc. Young	A deciduous densely tufted bamboo. Culms 8 to 16 meter high, 2.5 to 8 cm diameter, pale blue green when young, dull green or yellow on maturity, nodes somewhat swollen, basal nodes often rooting, lower nodes often with branches; internodes 30 to 45 cm long, thick-walled. Culm sheaths variable, lower ones shorter, 8 to 30 cm



				shoots are commonly used as food. Decoction of leaves and nodes and silicious matter is used in the traditional medicine.	long with golden brown stiff hairs on the back, sometimes glabrous in dry localities, striate, rounded at the top, margin hairy; ligule 2 to 3 mm high, toothed; auricles small, blade triangular, awl-shaped, hairy on both sides. Leaves linear lanceolate, small, rounded at the base into a short petiole, tip sharply acuminate with twisted point, rough and often hairy, softly hairy beneath; ligule very short. Inflorescence large panicle; rachis rounded, smooth. Spikelets spinescent, usually hairy, the fertile intermixed with many sterile smaller ones, with 2 or 3 fertile flowers; empty glumes 2 or more, ovate spinescent, many-nerved; flowering glumes ovate, ending in a sharp spine surrounded by ciliate tufts of hair; palea ovate or obovate, emarginate, lower ones 2-keeled, ciliate on the keels and 2 nerved between them, uppermost not keeled, often nearly glabrous, 6 to 8 nerved. Stamens long-exserted; turbinate, stalked, hairy above and surmounted by a long style ending in a purple feathery stigma.
56.	Shishm	<i>Dalbergia sissoo</i>	Fabaceae	Timber tree, the young branches and foliage eaten by livestock. After teak, it is the most important cultivated	<i>D. sissoo</i> is a medium to large deciduous tree with a light crown which reproduces by seeds and suckers. It can grow up to



				timber tree in India, planted on roadsides, and as a shade tree for tea plantations. Sissoo makes first class cabinetry and furniture. It is used for plywood, agricultural, and musical instruments, skis, carvings, boats, floorings, etc. The leaves are used for fodder.	a maximum of 25 m (82 ft) in height and 2 to 3 m (6 ft 7 in to 9 ft 10 in) in diameter, but is usually smaller. Trunks are often crooked when grown in the open. Leaves are leathery, alternate, pinnately compound and about 15 cm (5.9 in) long. Flowers are whitish to pink, fragrant, nearly sessile, up to 1.5 cm (0.59 in) long and in dense clusters 5–10 cm (2.0–3.9 in) in length. Pods are oblong, flat, thin, strap-like 4–8 cm (1.6–3.1 in) long, 1 cm (0.39 in) wide and light brown. They contain 1–5 flat bean-shaped seeds 8–10 mm (0.31–0.39 in) long. They have a long taproot and numerous surface roots which produce suckers. Young shoots are downy and drooping; established stems with light brown to dark gray bark to 2.5 cm (0.98 in) thick, shed in narrow strips; large upper branches support a spreading crown.
57.	Bhirra	<i>Chloroxylon swietenia</i>	Rutaceae	The wood produced by the tree is often a golden colour with a reflective sheen. It is used for small luxury items and as a veneer in wooden furniture. It is one of the best-known satinwoods.	Ceylon Satinwood is a medium-sized deciduous tree, growing to 15–20 m tall, with thick, fissured, slightly corky bark and pinnate leaves. The flowers are small, creamy-white, produced in panicles; the fruit is an oblong three-segmented capsule 2.5–4.5 cm long, containing 1–4 seeds in



					each segment.
58.	Munaga	<i>Moringa oleifera</i>	Moringaceae	Almost every part of plant is of value for food. Seed is said to be eaten like a peanut in Malaya. Thickened root used as substitute for horseradish. Foliage eaten as greens, in salads, in vegetable curries, as pickles and for seasoning. Leaves pounded up and used for scrubbing utensils and for cleaning walls. Seeds yield 38–40% of a non-drying oil, known as Ben Oil, used in arts and for lubricating watches and other delicate machinery. Oil is clear, sweet and odorless, never becoming rancid; consequently it is edible and useful in the manufacture of perfumes and hairdressings. Wood yields blue dye. Leaves and young branches are relished by livestock. Trees planted on graves are believed to keep away hyenas and its branches are used as charms against witchcraft. Bark can serve for tanning; it also yields a coarse fiber.	Short, slender, deciduous, perennial tree, to about 10 m tall; rather slender with drooping branches; branches and stems brittle, with corky bark; leaves feathery, pale green, compound, tripinnate, 30–60 cm long, with many small leaflets, 1.3–2 cm long, 0.6–0.3 cm wide, lateral ones somewhat elliptic, terminal one obovate and slightly larger than the lateral ones; flowers fragrant, white or creamy-white, 2.5 cm in diameter, borne in sprays, with 5 at the top of the flower; stamens yellow; pods pendulous, brown, triangular, splitting lengthwise into 3 parts when dry, 30–120 cm long, 1.8 cm wide, containing about 20 seeds embedded in the pith, pod tapering at both ends, 9-ribbed; seeds dark brown, with 3 papery wings. Main root thick.
59.	Katumar	<i>Ficus hispida</i>	Moraceae	Plant pacifies vitiated pitta, leukoderma, psoriasis, hemorrhoids, ulcers, jaundice, inflammations, fever	Shrub to medium sized tree, up to 10 m tall. Bark brownish, lenticellate; blaze pink, Branchlets terete, with hollow internodes, densely hispid



				and alopecia	with brown or grey hairs, lenticellate Leaves simple, opposite, decussate; stipules to 2.5 x 1 cm, caducous, leaving annular scar; petiole 1-10 cm long, canaliculate, hispid; lamina 7-35 x 3-16 (40 x 18 cm in saplings), elliptic-oblong, narrow ovate, narrow obovate, apex caudate-acuminate, base rounded subcordate or truncate-subcordate, margin entire or dentate sometimes irregularly toothed, scabrid on both surface, hispid beneath; midrib slightly raised above; 3-nerved at base; secondary_nerves 4-9 pairs, often branched, ascending; tertiary_nerves broadly reticulo-percurrent. Inflorescence syconia, clustered on tubercles of main trunk, older branches and sometimes on pendulous leafless branches; flowers unisexual
60.	Katpipari	<i>Ficus retuza</i>	Moraceae	Leaves and bark used as poultice for rheumatism. In Concan, juice of leaves used for flatulent colic and the juice of bark used for liver diseases. Bark juice used for liver diseases. The rootlets are dried and powdered, mixed with salt and applied to toothaches. The adventitious rootlets used for toothaches, for which they are dried, powdered and applied to	<i>Ficus retusa</i> is a rapidly-growing, rounded, broad-headed, evergreen shrub or tree that can reach 15 metres (49 ft) or more in height with an equal spread. The smooth, light grey trunk is quite striking, can grow to around 1 metre (3.3 ft) in diameter, and it firmly supports the massively spreading canopy. The glossy, dark green, leathery leaves are densely clothed on large, somewhat weeping



				the decaying or aching tooth.	branches and are usually infested with thrips. New growth, produced all year long, is a light rose to chartreuse color, giving the tree a lovely two-toned effect
61.	Karonda	<i>Carrisa opaca</i>	Apocynaceae	Fruit and leaves are cardiac and stimulant. Branches are used in toothache and as toothbrush. Extracted oil from the bark is used to destroy maggots infesting wounds. The fruit are edible but tart, and taste like a giant cranberry, though some also taste overtones of strawberry or apple-like flavour, and rich in Vitamin C, calcium, magnesium and phosphorus	The species have maximum heights between 2 and 10 m tall, with spiny branches. The leaves are waxy and oblong, 3–8 cm long, and thick and leathery. The flowers are produced throughout most of the year; they are 1–5 cm diameter, with a five-lobed white or pink corolla, solitary or borne in clusters; some have a fragrance reminiscent of Gardenia. This makes them popular garden plants. The fruit is a plum-shaped berry, red to dark purple-black in different species, 1.5–6 cm in length, and containing up to 16 flat brown seeds.
62.	Sirkune	<i>Neillia thyrsiflora</i>	Rosaceae	Shrubs erect, to 2 m tall. Branchlets red-brown, angled, glabrous to slightly pubescent; buds red-brown, ovoid, with 2 or 3 scales, apex obtuse; often 2 or 3 buds superposed in axils of flowering branches. Stipules ovate-lanceolate, ca. 6 mm, subglabrous, margin remotely serrate, apex acute; petiole 1-1.5 cm, subglabrous; leaf blade	



				ovate to ovate-elliptic, 6-8.5 cm long, 4-6 cm wide, abaxially sparsely pubescent on veins or subglabrous, base rounded or subcordate, margin usually 3-parted, rarely with 3-5 equal lobes, sharply doubly serrate, apex long acuminate. Panicle 6-15.5 cm in diameter, densely or laxly branched, usually many flowered; peduncle and pedicels slightly pubescent. Flowers ca. 4 mm in diameter; pedicel ca. 3 mm. Hypanthium campanulate, 2-3 mm, abaxially pubescent. Sepals triangular, equaling hypanthium, sparsely pubescent on both surfaces, margin entire, apex caudate. Petals white, obovate, ca. 2 mm. Stamens 10-15. Ovary cylindric, glabrous or only pubescent on sutures, or wholly pubescent; ovules 10-12. Follicles cylindric. Seeds ovoid.	
63.	Subabool	<i>Leuceana leucocephala</i> Roxb.	Fabaceae	<i>L. leucocephala</i> is a species of small mimosoid tree native to southern Mexico and northern Central America, but is now naturalized throughout the tropics. It is known as Su-babool in India. It has a very fast growth rate, young trees reach a height of more than 20 ft in two to three	During the 1970s and 1980s, it was promoted as a "miracle tree" for its multiple uses. It provides an excellent source of high-protein cattle fodder. It is also efficient in nitrogen fixation, at more than 500 kg/ha/year. The young pods are edible and occasionally eaten with Javanese vegetables salad with spicy peanut sauce



				years. Bark on young branches smooth, grey-brown, darker grey-brown and rougher with shallow, rusty orange-brown vertical fissures. Leaves with 6-9 pairs pinnae; pinnular rachis 5-10 cm long, leaflets 9-16 mm long, 2-5 mm wide, 13-21 pairs per pinna, slightly asymmetric, linear-oblong to weakly elliptic, acute at tip, rounded to obtuse at base, glabrous except on margins. Pods 11-19 cm long, 15-21 mm wide, linear-oblong, acute or rounded at apex, 8-18 seeded, mid- to orange-brown, densely covered in white velvety hairs. Seeds hard, dark brown with a hard, shining testa, 7-10 mm long, 4-6 mm wide, aligned transversely in pod.	and spicy fish wrapped in papaya or taro leaves in Indonesia, papaya salad in Laos and in Thailand, where they are known as phakatin.
64.	Tinsa	<i>Ougeinia dalbergioides</i> Benth.	Fabaceae	<i>Ougeinia dalbergioides</i> is a medium-sized semi-deciduous tree, commonly attaining 40-50 cm DBH and 7-14 meters in height. The stem is often crooked, but in some areas the tree is straight. The bark, varying from pale pinkish-brown to dark bluish gray, is somewhat rough and exfoliates in irregular thin soft scales. Leaves are pinnately trifoliate, smooth above and lightly pubescent below.	<i>Ougeinia</i> yields a valuable timber. It is now frequently utilized for plywood. The timber of this species is superior to <i>Tectona grandis</i> in terms of shock resistance. Sandan timber is used in the manufacture of agricultural implements, construction timbers, furniture and textile mill implements. The leaves are highly valued as cattle feed. In some areas, natural stands of this species are such important fodder resources, timber



				The obovate leaflets are generally 6-12 cm long and 2-15 cm wide, but size varies greatly. The light-pink to white flowers emerge in clusters from February to May. The previous years branches generally do not bear flowers. Branches bearing flowers are leafless, while others retain leaves. Flowering trees are conspicuous and afford a beautiful sight.	harvesting is forbidden. Leaves contain 12- 15% crude protein. Bark fibers are suitable for making rope. The bark is used as a fish poison and to reduce fevers. A sap exudate is used to make a medicine to treat dysentery. The tree is a host plant for lac producing insects.
65.	Ael	<i>Morinda tinctoria</i> Roxb		<i>Morinda tinctoria</i> is commonly known as Indian Mulberry. It is an evergreen small tree growing to 5-10 m tall. The leaves are 15-25 cm long, oblong to lanceolate. The flowers are tubular, white, scented, about 2 cm long. The fruit is a green syncarp, 2-2.5 cm diameter.	The plant is extensively cultivated in India in order to make the morindone dye sold under the trade name "Suranji". Morindone is used for the dyeing of cotton, silk and wool in shades of red, chocolate or purple. The colouring matter is found principally in the root bark and is collected when the plants reach three to four years of age. If the trees are allowed to mature then hardly any colouring substance remains. The small roots yield the most dye and those above about 1 cm diameter are discarded. The active substance is extracted as the glucoside known as morindin that upon hydrolysis produces the dye. Morindone is a mordant dye giving a yellowish-red colour with an aluminium mordant, chocolate with a



					chromium mordant, and dull purple to black with an iron mordant.
66.	Aeroni	<i>Aronia melanocarpa</i> (Michx.) Elliott	Rosaceae	<i>Aronia melanocarpa</i> tends to be smaller, rarely exceeding 1m tall, rarely 3 m, and spreads readily by root sprouts. The leaves are smaller, not more than 6 cm wide, with terminal glands on leaf teeth and a glabrous underside. The flowers are white, 1.5 cm wide, with glabrous sepals. The fruit is black, 6–9 mm wide, not persisting into winter. The chokeberries are attractive ornamental plants for gardens.	Juice from these berries is astringent and not sweet, but high in vitamin C and antioxidants. The berries can be used to make wine, jam, syrup, juice, soft spreads, and tea. Its fruit can be eaten raw.
67.	Dhamin	<i>Grewia tiliifolia</i> Vahl.	Tiliaceae	Dhaman is a moderate-sized to large tree, attaining a bole length of about 30 ft. and a girth of 7 ft. or more. Bark grey or dark brown; leaves stipulate, ovate with oblique base, acuminate, crenate-dentate; flowers small, borne on thick axillary peduncles; drupe globose and of the size of a pea, 2-4 lobed, black and edible. The yellow flower resembles the true Phalsa flower very much. The main difference is in the leaves. The leaves of Dhaman are oblique heart-shaped. The botanical name <i>tiliifolia</i> means, leaves resembling Tilia.	
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69.	Banberi	<i>Actaea alba</i> L.	Ranunculaceae		

***Lantana camara* Importance**

Lantana is mainly used as herbal medicine and in some areas as firewood and mulch. In some countries, it is planted as a hedge to contain or keep out livestock. Leaf extracts of *Lantana* exhibit antimicrobial, fungicidal, insecticidal and nematocidal properties. Verbascoside, which possesses antimicrobial, immunosuppressive and antitumor activities, has been isolated from *Lantana*. *Lantana* oil is sometimes used for the treatment of skin itches, as an antiseptic for wounds and externally for leprosy and scabies. Also, the plant extracts are used in folk medicine for the treatment of cancers, chickenpox, measles, asthma, ulcers, swellings, eczema, tumours, high blood pressure, bilious fevers, catarrhal infections, tetanus, rheumatism and malaria. The stems of *Lantana*, if treated by the sulphate process, can be used to produce paper. Its other uses include making baskets and temporary shelters and fuel for cooking and heating. In some areas, *Lantana* may provide shelter and vital winter food for many native birds. A number of endangered bird species utilize *Lantana* thickets when their natural habitat is unavailable. In Australia, the vulnerable black-breasted buttonquail, *Turnix melanogaster*, feeds and roosts in *Lantana* thickets adjacent to vine forest, which is its more favoured habitat. While buttonquails prefer intact vine forest, *Lantana* provides an important temporary refuge for them between forest remnants. In central Kenya, where natural riverine thickets have been almost completely cleared, the endangered bird *Turdoides hindei* has become dependent on *Lantana* thickets, and unless sufficient suitable natural habitat can be restored, the survival of this species depends on the retention of *Lantana* bushes. Apart from benefiting some bird species, *Lantana* is a major



nectar source for many species of butterflies and moths. The plant can prevent soil compaction and erosion and is a source of organic matter for pasture renovation. In Australia, ornamental *Lantana* is an excellent source of income in the nursery sector. In dense stands of *Lantana*, the capacity of the soil to absorb rain is lower than under good grass cover. This could potentially increase the amount of run-off and the subsequent risk of soil erosion in areas infested with the weed. *Lantana* has been implicated in poisoning of a number of animals including cattle, buffalo, sheep and goats since its leaves and seeds contain the toxic triterpenoids, Lantadene A and Lantadene B. Ingestion of the plant parts can cause pink nose disease, jaundice and muzzle in cattle. Heavy outbreaks of *Lantana* poisoning occur during drought. The plant has many secondary impacts, especially in tropical countries where it can harbour several serious pests. Malarial mosquitoes in India and tsetse flies in Rwanda, Tanzania, Uganda and Kenya shelter in *Lantana* bushes and cause serious health problems. The rust *Prospodium tuberculatum* being sprinkled onto *Lantana* leaves.