



OBSERVATIONS ON THE MEDICINAL FLORA OF GARHMUKTESHWAR DISTRICT HAPUR IN UTTAR PRADESH STATE OF INDIA

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Abstract

One of the most important parts of any healthcare system is the availability of therapeutically active medications, and medicinal plants provide just that. A vital component of Indian culture and heritage for countless generations is the Indian medical system. Traditional healers (vaidya, hakims) who are similar to modern doctors employed plant-based remedies extensively for the treatment, prevention, and amelioration of both acute and chronic human ailments. India ranks high among Asian nations when it comes to the accumulation of traditional knowledge. Traditional medicine encompasses both structured systems, like Ayurveda, Siddha, Unani, and Greek medicine, and more informal systems, like indigenous, folk, or tribal medicine. All around the globe, traditional medical systems have relied heavily on medicinal plants. Plant medicines play an important role in the Indian medical traditions of Ayurveda, Siddha, and Unani. Among the many plant species found in Uttar Pradesh's Hapur district are several with strong potential as medical remedies. This study delves into the traditional knowledge and medical usage of plants found in the Garhmukteshwar District of Hapur. To understand different ecosystems, one must be familiar with the floristic and vegetative composition of any given area. In order to periodically monitor and evaluate the floristic composition of the region, this is essential for taxonomic field workers. Numerous reclassifications and abundant new plant species have emerged in the years following the release of Sir J. D. Hooker's "The Flora of British India" (1872–1897). Much focus has been placed on an exhaustive study of native floras since the reopening of the Botanical Survey of India in 1954. "Our universities can do excellent work in the selected areas in the neighbourhood of their headquarters," Santapau (1958) proposed. In the silver anniversary edition of "Botanica," Maheshwari (1975) also made remarks and suggestions along these lines. There is a lot of room for improvement in the current state of plant exploration in our nation, and a lot of attractive places and districts that may benefit from more thorough studies of distribution and phenology of various taxa. Consequently, the research being conducted here focuses on the flora of the recently formed district of Hapur. Although Charak was cognizant of the abundance of medicinal plants in the Himalayas, he produced the Ayurveda in the lower Ganga valley. The Charak Samhita states that the entire Himalayan region is a veritable treasure trove of therapeutic plants (Agrawal 1997, Agrawal *et al.*, 2007).

Keywords : Garhmukteshwar, Medicinal plants, Ayurveda, Ethnobotany

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Introduction

Hapur district, located in the state of Uttar Pradesh, India, is part of the National Capital Region (NCR). It was established as a separate district in 2011, carved out from the Ghaziabad district. Its coordinates are approximately 28.7304° N latitude and 77.7800° E longitude. The altitude of Hapur is around 211 meters (692 feet) above sea level. The area of Hapur district in Uttar Pradesh, India, is approximately 1,755 square kilometers. The district is known for its agricultural activities, especially the production of grains, pulses, and sugarcane. Hapur is also recognized for its brassware and handicrafts industry. The district comprises three tehsils: Hapur, Garhmukteshwar and Dhaulana. Additionally, it has historical significance with sites like Garhmukteshwar, a prominent pilgrimage destination on the banks of the Ganges River. The district is well-connected through road and rail networks, contributing to its economic growth and development. Garhmukteshwar is a town located in the

Hapur district of Uttar Pradesh, India. It holds historical and religious significance, primarily due to its ancient temples and the presence of the Ganga River., is rich in biodiversity and home to a wide variety of medicinal plants. This study aims to document and analyze the traditional uses of medicinal plants in this region. Ethnobotanical surveys conducted in various villages and forest areas revealed that the local communities utilize a diverse range of plant species for treating various ailments.

Materials and Method

Area under Study:

The region is primarily agricultural, with much of the land utilized for farming. However, Hapur does have some areas designated as forest land, which contribute to the local ecosystem by providing habitat for various flora and fauna. The forests in Hapur are part of the larger Indo-Gangetic plains, characterized by tropical dry deciduous forests. These forests are typically dominated by species such as teak, sal, and bamboo, along with a variety of shrubs and grasses. The

forest areas help in maintaining ecological balance, supporting biodiversity, and providing resources like timber and non-timber forest products to the local communities. Efforts are often made by the government and environmental organizations to preserve and enhance the forest cover through afforestation and conservation programs. These initiatives aim to combat deforestation, promote sustainable land use, and increase awareness about the importance of forests in the region.

Topography:

The region's elevation averages around 200 meters above sea level, with fertile alluvial soil ideal for agriculture. The district lacks major rivers but benefits from nearby river systems such as the Ganges and Yamuna, which influence groundwater levels and soil fertility. The area supports diverse crops, including wheat and sugarcane, and combines both urban and rural landscapes. Hapur's subtropical climate, with hot summers, a monsoon season, and mild winters, complements its agricultural suitability.



Observation and data collection site Garhmukteshwar

Rivers and canals:

Hapur district, while not home to any major rivers, is influenced by nearby river systems and features several canals that play a crucial role in irrigation and water supply. Here are some key points about the rivers and canals in Hapur.

Influence of Nearby Rivers:

Ganges River: Although it does not flow directly through Hapur, the Ganges River's proximity significantly influences the district's groundwater levels and soil fertility.

Yamuna River: Similar to the Ganges, the Yamuna River is nearby and affects the region's water resources.

Irrigation Canals:

Upper Ganga Canal: This canal system, originating from the Ganges River, provides essential irrigation water to Hapur and surrounding districts, supporting the agricultural needs of the region.

Eastern Yamuna Canal: This canal helps distribute water from the Yamuna River, aiding in irrigation and maintaining the agricultural productivity of the district.

Minor Streams and Water Bodies:

The district also features smaller streams and water bodies that contribute to local irrigation and water needs.

These canals and the influence of nearby rivers are vital for maintaining Hapur agricultural activities, ensuring water availability, and supporting the overall rural economy.

Geology and Soil:

A thick layer of Indo-gangetic alluvium from the Pleistocene to the subrecent periods mainly covers the district Hapur from a geological perspective. The alluvium was formed by a continuous and malleable sequence of subaerial and river deposits that included layers of clay, sand, and silt interbedded with one another. Because of its relatively low annual rainfall, Hapur experiences a semi-arid climate. Extreme heat (45°C) and cold (6.2°C to 1°C) are both possible in the Hapur district. The weather is very periodic and falls into one of three distinct vegetational periods:

1. The dry and hot session - March to June
2. The dry and cold winter – October to February
3. Warm monsoon period – July to September

Rainfall:

Beginning in the final week of June or the first week of July, this region experiences the monsoon. Total yearly rainfall ranged from 763 to 1247 mm from 2002 to 2004. From July through September, we get the majority of our annual rainfall.

Wind:

June has the strongest winds, while November has the lightest. The wind often blows from the west to the northwest from the months of September through May.



India



Uttar Pradesh



Hapur

Methodology:

1. Collection of plants:

Plants were collected throughout the year and from Garhmukteshwar tehsil in the Hapur district. At least four times per season, the plants were gathered. All kinds of natural plants, including annuals, perennials, and ornamentals, were sought after during the plant excursions. To cover as much ground as possible, excursions were scheduled. Rainy, winter, and summer were the three seasons used for collecting plants.

2. Preservation of Plants:

The plants were stored following each harvest. The plants were allowed to dry before being correctly mounted on herbarium sheets of the typical size (16.5' x 11.5"). In order to identify all ecological varieties, plants were collected from every tehsil and block. The plants were dried by pressing them between rough papers and blotting papers. A solution of 1% HgCl₂ in rectified spirit was used to poison the preserved plants, and then they were securely stored. As a repellent, herbarium sheets were placed in herbarium almira and periodically fumigated with formaldehyde using naphthalene balls.

3. Identification:

A thorough examination of the plant characteristics, along with comparisons to all existing standard flora and other taxonomic literature, allowed for the plants' identification.

Conclusion:

The research points to the need of better cooperation in the Hapur district's medicinal plant sector. The government, non-governmental organisations (NGOs), and research groups must work together to accomplish this in the fields of conservation, biodiversity, and healthcare. The city's inhabitants still hunt for and use plants that have long been used as traditional remedies in the countryside. Despite the intense urbanisation in the area, medicinal plants continue to play an important role in the health care of the inhabitants. Some species may be limited in their ability to spread due to present overexploitation, soil compaction from trampling, and urbanisation. Therefore, sustainable cultivation and harvesting programmes in the Ghaziabad area should be initiated, and multifaceted efforts should be made to preserve these valuable species for future usage. The writers are deeply indebted to the Hapur district residents for generously sharing their ethnobotanical wisdom. For his help with the information, I am also grateful to Dr. Bhupesh Gupta.

Table 1: List of most important local available Medicinal plants of Garhmukteshwar (U.P.) India

S.N.	Hindi and English Name	Botanical name	Family	Plant part medicinal uses
1.	शिरीष Woman's tongue	<i>Albizia lebeck</i>	Fabaceae	Female disorders, respiratory ailments, Jaundice
2.	नल Giant reed	<i>Arundo donax</i>	Poaceae	Gastritis, Gastric Ulcer, colic bloating and decreased appetite
3.	अपामार्ग Devil's horsewhip	<i>Achyranthes aspera</i>	Amaranthaceae	Bleeding, bronchitis, debility, dropsy, cold, dog bite
4.	बेल Stone apple	<i>Aegle marmelos</i>	Rutaceae	Antimicrobial, antiviral, anti-inflammatory, anti infertility
5.	कदम्ब Bur flower tree	<i>Anthocephalus indicus</i>	Rubiceae	Fever, uterine complaints, tumour, anaemia,
6.	बबूल Egyptian thorn	<i>Acacia arabica</i>	Fabaceae	Relieves pain and irritation, wound healing,
7.	खैर Cutch tree	<i>Acacia catechu</i>	Fabaceae	Blood pressure, dysentery, colitis, gastric problems
8.	सप्तपर्ण Scholar tree	<i>Alstonia scholaris</i>	Apocynaceae	Treatment of malaria, jaundice
9.	नीम Indian lilac	<i>Azadirachta indica</i>	Meliaceae	Treats Fungal Infections, increases immunity
10	श्वेत वासा Malabar nut	<i>Adhatoda vasica</i>	Acanthaceae	Anti-inflammatory, anti-bleeding, bronchodilator
11	अतिबला Country mallow	<i>Abutilon indicum</i>	Malvaceae	Gout, tuberculosis, ulcers
12	उलट कंबल Devil's cotton	<i>Abroma augustum</i>	Malvaceae	Diabetes insipidus, sleeplessness, carbuncle
13	प्याज़ Onion	<i>Allium cepa</i>	Amaryllidaceae	Dysentery, ulcer wounds, scars, keloids
14	लहसुन	<i>Allium sativum</i>	Amaryllidaceae	Flatulence, dysentery, liver

	Garlic			disorders, tuberculosis,
15	घृत कुमारी Aloe	<i>Aloe vera</i>	Asphodelaceae	Dandruff, Minor burns, Skin abrasions
16	सतावर Shatawari	<i>Asparagus racemosus</i>	Asparagaceae	Diabetes, HIV/AIDS, lactation
17	गुंजा या रती Coral Bead/Rosy pea	<i>Abrus precatorius</i>	Fabaceae	Prevent rabies, fever, cough and cold.
18	खोकली Indian acalypha	<i>Acalypha indica</i>	Euphorbiaceae	Anti-diabetes, anti-hyperlipidemic, anti-obesity
19	दमनक Common mugwort	<i>Artemesia vulgaris</i>	Asteraceae	Boost energy, calm nerves, support digestion
20	कमल कैक्टस Century plant	<i>Agave Americana</i>	Asparagaceae	Constipation, cancer, male-pattern baldness
21	माणक Giant taro	<i>Alocasia indica</i>	Araceae	Control bleeding and reduce swelling
22	मत्स्याक्षी Sissoo spinach	<i>Alternanthera sessilis</i>	Amaranthaceae	Hepatitis, tight chest, bronchitis, asthma
23	स्वर्णक्षीरी/ सत्यानाशी Mexican poppy	<i>Argemone maxicana</i>	Papaveraceae	Tumors, warts, skin diseases
24	जंगली पुदीना Billygoat-weed	<i>Ageratum conyzoides</i>	Asteraceae	Dyspepsia, eye problem, uterine disorders
25	कोकिलाक्ष/तालमखाना Long Leaves Barleria	<i>Asteracantha longifolia</i>	Acanthaceae	Rheumatism, inflammation, jaundice
26	कचनार Orchid tree	<i>Bauhinia variegata</i>	Fabaceae	Antibacterial, antidiabetic, analgesic
27	कनियार/गुलाबी कचनार Camel's foot/ butterfly tree	<i>Bauhinia purpurea</i>	Fabaceae	Anti-inflammatory, anti-diarrheal, anticancerous
28	बांस /वंश Bamboo	<i>Bambusa arundinacea</i>	Gramineae	Various inflammatory conditions
29	दंती Red physic nut	<i>Baliospermum montanum</i>	Euphorbiaceae	Dropsy, anascara, and jaundice
30	पुनर्नवा Hogweed	<i>Boerhavia diffusa</i>	Nyctaginaceae	Pain relief, anti-inflammation, and treating indigestion
31	पथरचटा Kalanchoe	<i>Bryophyllum pinnatum</i>	Crassulaceae	Diabetes, diuresis, dissolving kidney stones
32	बेल पालक Malabar Spinach	<i>Basella alba</i>	Basellaceae	Improve testosterone levels in males
33	वज्रदंती Porcupine flower	<i>Barleria prionitis</i>	Acanthaceae	Catarrhal affections, whooping cough, inflammations

34	सरसों Field mustard	<i>Brassica campestris</i>	Brassicaceae	Itching, Skin allergic conditions, Skin diseases
35	राई Black mustard	<i>Brassica nigra</i>	Brassicaceae	Common cold, painful joints and muscles
36	पातगोभी Cabbage	<i>Brassica oleracea</i>	Brassicaceae	Gout and rheumatism
37	शिवलिंगी Lollipop climber	<i>Bryonopsis laciniosa</i>	Cucurbitaceae	Sexual dysfunction, impaired fertility
38	ताड़ /पामीरा पाम Tal palm	<i>Borassus flabellifer</i>	Arecaceae	Psychiatric conditions, hepatomegaly and acidity.
39	अमलतास Golden shower	<i>Cassia fistula</i>	Fabaceae	Joint pain, migraine, chest pain
40	श्लेष्मातक Indian cherry	<i>Cordia dichotoma</i>	Boraginaceae	Diarrhea, leprosy, gonorrhoea and burning sensation
41	करोंदा Karanda	<i>Carissa carandas</i>	Apocynaceae	Acidity, indigestion, fresh and infected wounds
42	भांग Marijuana	<i>Cannabis sativa</i>	Cannabaceae	Pain, spasms, asthma, insomnia,
43	सुदर्शन Poison bulb	<i>Crinum asiaticum</i>	Amaryllidaceae	contusions, earache, edema, fever, fractures
44	कासमर्द Coffeeweed	<i>Cassia occidentalis</i>	Caesalpiniaceae	Antibacterial, antifungal, antimalarial, anti-inflammatory
45	चक्रमर्द Sickle senna	<i>Cassia tora</i>	Caesalpiniaceae	Antiperiodic, anthelmintic, ophthalmic, liver tonic
46	वैजयंती Job's tears	<i>Coix lacryma</i>	Poaceae	Diuretic, spleen, lung, dispel dampness and heat
47	शिमला मिर्च Bell pepper	<i>Capsicum annuum</i>	Solanaceae	Foothache, poor circulation, fever, hyperlipidemia
48	कागजी नींबू Citron	<i>Citrus medica</i>	Rutaceae	Anti-catarthal, capillary protector, anti-hypertensive
49	अमरबेल Giant dodder	<i>Cuscuta reflexa</i>	Convolvulaceae	Bilious disorders
50	मोथा Coco-grass	<i>Cyperus rotundus</i>	Cyperaceae	Malaria, and stomach and bowel disorders
51	नागरमोथा Nutgrass	<i>Cyperus scariosus</i>	Cyperaceae	Astringent, antimicrobial, hypotensive
52	मंदार/ आक Giant milk weed	<i>Calotropis gigantean</i>	Apocynaceae	Sinus fistula, rheumatism, mumps, burn injuries
53	मंदार/ आक Apple of sodom	<i>Calotropis procera</i>	Apocynaceae	Antidote for snake bite, body pain
54	कुन्दू Baby watermelon	<i>Coccinia indica</i>	Cucurbitaceae	Earache, indigestion, eye infections, nausea,

55	पपीता Papaya	<i>Carica papaya</i>	Caricaceae	Antibacterial, antiviral, antitumor
56	मदनमस्त Queen sago	<i>Cycas circinalis</i>	Cycadaceae	sores and swellings
57	दूब या दुर्वा Bermuda grass	<i>Cynodon dactylon</i>	Poaceae	Convulsions, cough, cramps, diarrhea, dropsy
58	बथुआ lamb's quarters	<i>Chenopodium album</i>	Amaranthaceae	Anthelmintic, cardiotoxic, carminative, digestive
59	लाल कद्दू Giant pumpkin	<i>Cucurbita maxima</i>	Cucurbitaceae	Urinary disorders, blood pressure regulation
60	नींबू Lemon	<i>Citrus medica</i>	Rutaceae	Antimicrobial, analgesic, strong antioxidant, anticancerous
61	हल्दी Turmeric	<i>Curcuma longa</i>	Zingiberaceae	Hepatic disorders, rheumatism, and sinusitis.
62	लाल मुर्गा Cockscomb crested	<i>Celosia species</i>	Amaranthaceae	Headache, sores, ulcers, eye inflammations
63	हुसहुस Asian spider flower	<i>Cleome viscosa</i>	Cleomaceae	Hypertension, malaria, neurasthenia
64	धनिया Coriander	<i>Coriandrum sativum</i>	Apiaceae	Constipation, diarrhea, gas (flatulence), nausea
65	बड़ा निम्बू Buddha's finger	<i>Citrus medica ver.lypica</i>	Rutaceae	Abdominal colic, digestive disorder
66	रात चमेली Night Jasmine	<i>Cestrum nocturnum</i>	Solanaceae	Analgesic, antifungal, anti-convulsant
67	लाल मुर्गा Cockscomb crested	<i>Celosia cristata</i>	Amaranthaceae	Eye inflammations, skin eruption, painful menstruation
68	भांट Hill glory bower	<i>Clerodendrominfortum laminaceae</i>	Lamineaceae	Vermifuge, anticonvulsant, antidiabetic
69	सफेद मूसली Indian spider plant	<i>Chlorophytum arundianaceum</i>	Asparagaceae	Diabetes, arthritis and increasing body immunity
70	पाठा Velvet leaf	<i>Cissampelos pareira</i>	Menispermceae	Rheumatism, fever, asthma, cholera, diarrhoea
71	फ़रीद बूटी Broom creeper	<i>Cocculus hirsutus</i>	Menispermceae	Skin diseases, stomach disorders, urinary diseases
72	काना Benghal day flower	<i>Commelina species</i>	Commelinaceae	Sore throat, ophthalmia, burns, pain
73	पटसन White jute	<i>Corchorus capsularis</i>	Malvaceae	Aid to digestion, as a laxative and as a stimulant.

74	सिल्क काँटन Kapok tree	<i>Ceiba pentandra</i>	Malvaceae	Diuretic, as an aphrodisiac
75	अरबी Taro	<i>Colocasia esculenta</i>	Araceae	Diarrhea, internal hemorrhage, neurological disorder
76	अपराजिता Butterfly Pea	<i>Clitoria ternatea</i>	Fabaceae	Anxiolytic, antidepressant, anticonvulsant
77	तेज पत्ते Variegated laurel	<i>Croton species</i>	Euphorbiaceae	Fever, hypercholesterolemia, hypertension
78	शीशम North indian rosewood	<i>Dalbergia sissoo</i>	Fabaceae	Inflammations, infections, hernia, skin diseases
79	काला धतूरा Horn of plenty	<i>Datura metel</i>	Solanaceae	Toothache, and fever from inflammation
80	धतूरा Thorn apple	<i>Datura stramonium</i>	Solanaceae	Stomach and intestinal pain
81	कुश Halfa Grass	<i>Desmostachya bipinnata</i>	Poaceae	Diuretic, antidiarrheal
82	हवार Medhshingi	<i>Dolichandrone falcata</i>	Bignoniaceae	Menorrhagia and leucorrhoea.
83	सेम Hyacinth bean	<i>Lablab purpureus</i>	Fabaceae	Hypocholesterolemic, galactagogue
84	नीलगिरी Southern blue gum	<i>Eucalyptus globules</i>	Myrtaceae	Intestinal disorders, catarrhal condition
85	बडा दुधी Asthma weed	<i>Euphorbia hirta</i>	Euphorbiaceae	Dysentery, jaundice, pimples, gonorrhoea
86	जामुन Indian blackberry	<i>Eugenia jambolana</i>	Myrtaceae	Swelling ,gastritis, constipation
87	आंवला Indian gooseberry	<i>Emblica officinalis</i>	Zingiberaceae	Anemia, blood purifier, eye care, hair care
88	इलायची Cardamon	<i>Elettaria cardamomum</i>	Zingiberaceae	Teeth and gum infections, cataracts, Nausea
89	रामबाँस युक्का Pinwheel flower	<i>Ervatamia divaricata</i>	Apocynaceae	Anti-epileptic, anti-mania, brain tonic
90	गूलर Cluster Fig tree	<i>Ficus glomerata</i>	Moraceae	Hepatoprotective, gastroprotective, hypoglycemic
91	पीपल वृक्ष Sacred fig	<i>Ficus religiosa</i>	Moraceae	antiulcer, antibacterial, antidiabetic
92	प्लक्षी Java fig	<i>Ficus lacor</i>	Moraceae	Herpes, wounds, mouth ulcers, diarrhea
93	कठगूलर Hairy fig	<i>Ficus hispida</i>	Moraceae	Anemia, piles jaundice, vitiligo, hemorrhage

94	बरगद Indian banyan	<i>Ficus benghalensis</i>	Moraceae	Ulcers, erysipelas, vomiting, vaginal complains
95	रबर वृक्ष Rubber fig	<i>Ficus elastic</i>	Moraceae	Skin infections and skin allergies
96	अंजीर Common fig	<i>Ficus carica</i>	Moraceae	Inflammatory, and cardiovascular disorders
97	सौंफ Foeniculum vulgare	<i>Foeniculum vulgare</i>	Apiceae	Ailments related to digestive, endocrine
98	पित्तपापड़ा Fumitory	<i>Fumaria indica</i>	Papaveraceae	Laxative and diuretic
99	गुड़हल Chinese Hibiscus	<i>Hibiscus rosa sinesis</i>	Malvaceae	Cholesterol production, and cancer progression.
100	हुलहुल African spider flower	<i>Gynandropsis gynandra</i>	Cleomaceae	Fever
101	फालसा Phalsa	<i>Grewia asiatica</i>	Malvaceae	Toxemia, stomatitis, hiccough, asthma
102	जौ Barley	<i>Hordeum vulgare</i>	Poaceae	Skin abnormalities, arthritis, digestive diseases
103	लता कस्तूरी Musk mallow	<i>Hibiscus abelmoschus</i>	Malvaceae	loss of appetite, and stomach cancer
104	चिलबिल Indian elm	<i>Holoptelia integrifolia</i>	Ulmaceae	Nausea, diabetes, indigestion,
105	उलू Spear grass	<i>Imperata cylindrica</i>	Poaceae	Bacterial infections
106	बेहया Blush morning glory	<i>Ipomea fistulosa</i>	Convolvulaceae	Spasmogenic, hypoglycemic, hypotensive
107	दुध्या Black Creeper	<i>Ichnocarpus frutescens</i>	Apocynaceae	Glossitis, heamaturia, measles
108	नीलि नर्गन्डि Willow leaved justicia	<i>Justicia gendarussa</i>	Aconthaceae	Asthma, hepatic injuries, pathogenic infection
109	चमेली Common jasmine	<i>Jasminum officinale</i>	Oleaceae	Liver disease, abdominal disease
110	जूही के फूल Juhi jasmine	<i>Jasminum auriculatum</i>	Oleaceae	Treatment of wounds, diseases of the oral cavity
111	टमाटर Garden tomato	<i>lycoperscion esculentum</i>	Solanaceae	Burns/ scalds
112	मेंहदी Henna tree	<i>lawsonia inermis</i>	Lythraceae	Antiparasitic, antiviral, anticancer

113	जरुल Pride of india	<i>Lagerstroemia flos reginae</i>	Lythraceae	Bladder problems and hypertension
114	लौकी Bottle gourd	<i>Lagenaria vulgaris</i>	Cucurbitaceae	Piles, colitis, insanity, hypertension
115	छत्तियानाशी Wild sage	<i>Lantana cammora</i>	Verbeneceae	Ulcers, swellings, eczema, tumors
116	द्रोणपुष्पी Head leucas	<i>Leucas cephalotes</i>	Lamiaceae	Cough, fever scorpion stings
117	अलसी Linseed	<i>Linum usitatissimum</i>	Linaceae	Anti-diarrheal, anti-malarial, hepato-protective
118	तोरई घिया Smooth luffa	<i>luffa cylindrica</i>	Cucurbitaceae	Arthritis pain, muscle pain, and chest pain
119	चन्द्रशूर Bitter cress	<i>Lepidium didymum</i>	Brassicaceae	Cancer, gangrene and haemorrhoids.
120	जल पिप्पली Frog fruit	<i>Lippia nodiflora</i>	Verbeneceae	Boils, diarrhoea, joint pain, indigestion,
121	नारंगी चमेली Orange jasmine	<i>Murraya paniculata</i>	Rutaceae	Cough, hysteria and rheumatism
122	करी पत्ते Curry leaf tree	<i>Murraya koenigii</i>	Rutaceae	Fresh cuts, dysentery, bruises, and edema.
123	शहतूत Mulberry	<i>Morus indica</i>	Moraceae	Dizziness, insomnia, premature aging
123	छुईमुई Humble plant	<i>Mimosa pudica</i>	Fabaceae	Urogenital disorders, piles, dysentery, sinus,
124	केला Bananas	<i>Musa paradisiaca</i>	Musaceae	Ulcerative colitis, diabetes, sprue, uremia
125	आम Mango	<i>Mangifera indica</i>	Anacardiaceae	Hypertension, insomnia, rheumatism, toothache
126	सहजन Drum stick tree	<i>Moringa oleifera</i>	<u>Moringaceae</u>	Edema, cancer, Stomach problems
127	बकुल Tanjong tree	<i>Mimusops elengi</i>	Spotaceae	Gastroprotective, antibacterial, antifungal
128	पहाड़ी पुदीना English mint	<i>Mentha spicata</i>	Lamiaceae	Cold, cough, asthma, fever
129	पुदीना Mint	<i>Mentha species</i>	Lamiaceae	Antimicrobial, carminative, stimulant
130	बकायन Chinaberry tree	<i>Melia azadarach</i>	Meliaceae	Analgesic, anti-Inflammatory
131	वन मेथी Sweet clover	<i>Melilotus parviflora</i>	Fabaceae	Hepatoprotective, neuroprotective, anti-irritant

132	सुनिष्णक Water clover	<i>Marsilea minuta</i>	Marsileaceae	Treatment of cough and respiratory troubles
133	हरसिंगार Tree of Sadness	<i>Nyctanthes arbor-tristis</i>	Oleaceae	Anti-helminthic and anti-pyretic
134	कनेर Sweet-scented oleander	<i>Nerium indicum rubrum</i>	Apocynaceae	Adaptogenic, analgesic, aphrodisiac anticancer
135	पीला कनेर Indian Oleander	<i>Nerium indicum</i>	Apocynaceae	Stimulate cardiac muscles, relieve pain
136	कलौंजी Black caraway	<i>Nigella sativa</i>	Ranunculaceae	Antihypertensive, liver tonics, diuretics
137	त्रिखड़ा Garden pink-sorrel	<i>Oxalis latifolia</i>	Oxalidaceae	Diarrhoea, traumatic injuries, sprains
138	चंगेरी घास Creeping woodsorrel	<i>Oxalis corriculata</i>	Oxalidaceae	Influenza, fever, urinary tract infections
139	तुलसी Holy basil	<i>Ocimum sanctum</i>	Lamiaceae	Analgesic, adaptogenic and diaphoretic actions
140	वन तुलसी Common basil	<i>Ocimum basilicum</i>	Lamiaceae	Headaches, coughs, diarrhea
141	मरुआ Sweet marjoram	<i>Origanum majorana</i>	Lamiaceae	Respiratory and gastrointestinal problems
142	निसोथ Thomas lidpod	<i>Operculina turpethum</i>	Convolvulaceae	Fistulas, constipation, chronic gout, fever,
143	चंगेरी घास wood sorrel	<i>Oxalis acetosella</i>	Oxalidaceae	Astringent, diuretic, emmenagogue, expectorant,
144	पित्तपापड़ा Old World Diamond-Flower	<i>Oldenlandia corymbosa</i>	Rubiaceae	Promote diuresis and relieve stranguria.
145	पुत्रजीव Lucky Bean Tree	<i>Putranjiva roxburghii</i>	Euphorbiaceae	Phlegm, skin ailment, aridity
146	अशोक-भेड़ False Ashoka	<i>Polyalthia longifolia</i>	<u>Annonaceae</u>	Helminthiasis, diabetes and cardiac problems
147	भुईं आवला Virgate leaf-flowe	<i>Phyllanthus simplex</i>	Phyllanthaceae	Hepatopathy, hypertensive, diabetes
148	भुईं आवला Child Pick-A-Back	<i>Phyllanthus amarus</i>	Phyllanthaceae	Genitourinary system, liver, kidney and spleen.
149	काकजंघा Paniced Foldwing	<i>Peristrophe bicalyculata</i>	Acanthaceae	Rheumatism
150	बड़ी अरणी Wind killer	<i>Premna integrifolia</i>	Lamiaceae	Cold, obstinate fevers, flatulence, urticaria
151	सफेद चित्रक	<i>Plumbago zeylanica</i>	Plumbaginaceae	Chronic rheumatoid arthritis,

	Ceylon leadwort			skin diseases, tumorous growths
152	चंपा के फूल Red paucipan	<i>Plumeria chinensis</i>	Apocynaceae.	Anti-fertility, anti-inflammatory, antioxidant, hepato-protective
153	पीले अमरुद Yellow guava	<i>Psidium guajava</i>	<u>Myrtaceae</u>	Diarrhea, dysentery, stomach aches, and indigestion
154	खजूरी Wild Date Palm	<i>Phoenix sylvestris</i>	<u>Arecaceae</u>	Sore throats, fever, colds, intestinal troubles
155	उड़द Black Gram	<i>Phaseolus mungo</i>	Fabaceae	. Anti-inflammatory
156	जंगली मूंग Mudgaparni	<i>Phaseolus trilobus</i>	Fabaceae	Haemorrhoids, dyspepsia, sedative, coolant, anthelmintic
157	कणड़ी Indian Beech Tree	<i>Pongamia pinnata</i>	Fabaceae	Tumors, piles, skin diseases, and ulcers
158	अनार Crown jewel of the fruit world	<i>Punica granatum</i>	Lythraceae	High blood pressure, high cholesterol, hyperglycemia
159	बकुची Babchi	<i>Psoralea corylifolia</i>	Fabaceae	leukoderma, psoriasis, vitiligo, asthma, ulcers
160	कनक चंपा Maple-Leafed Bayur Tree	<i>Pterospermum acerifolium</i>	Sterculiaceae	ascites, cures ulcers, leprosy, constipation
161	पेटुनिया Violet-flowered Petunia	<i>Petunia alba</i>	Solanaceae	Flu, asthma, fever, bronchitis, high blood pressure
162	मचेची Common knotweed	<i>Polygonam plebeium</i>	<u>Polygonaceae</u>	Jaundice and hepatitis
163	बनारसी रसना Denseflower Knotweed	<i>Polygonam glabrum</i>	<u>Polygonaceae</u>	Renal and chest ailments
164	लाल गुलाचिन Firangipani	<i>Plumeria ruba</i>	Apocynaceae	Anti-inflammatory, antimicrobial
165	मूली Rat-tailed Radish	<i>Raphanus sativus</i>	Brassicaceae	Constipation, chronic tracheitis, and hypertension
166	तनिहो Cursed butter cup	<i>Ranunculus sceleratus</i>	Ranunculaceae	Eczema, herpes, pruritus, burns and swellings
167	अरंडी Castor oil plant	<i>Ricinus communis</i>	Euphorbiaceae	Bilharziasis, chronic backache, chronic headache
168	तरुणी White rose of york	<i>Rosa alba</i>	Rosaceae	Eye troubles, vaginal candidiasis, and laxative
169	वन पालक The curly dock	<i>Rumex crispus</i>	Polygonaceae	Gastrointestinal tract disorders, antihelminthic diseases

170	मरुल Bowstring hemp	<i>Sansevieria roxburghiana</i>	Asparagaceae	Antitumor, antibacterial, antidiabetic, antimicrobial
171	कांस Baruwa sugarcane	<i>Saccharum munja</i>	Poaceae	Burning sensation, herpes, duypepsia, dyscaria, erysipelas
172	गन्ना Sugarcane	<i>Saccharum officinalis</i>	Poaceae	Dysentery, diarrhea, menorrhagia, enteritis
173	शाल्मलि Silk cotton tree	<i>Salmaia malabarica</i>	Bombacaceae	Hemoptysis, influenza, pulmonary tuberculosis
174	चंदन East Indian sandalwood	<i>Santalum album</i>	Santalaceae	Antipyretic, antiseptic, antiscabetic, diuretic
175	कुब्जक Common sage	<i>Salvia plebeia</i>	Lamiaceae	Nephritis, hepatitis, bronchitis, common cold
176	घोड़ा तुलसी licorice weed	<i>Scoparia dulcis</i>	<u>Plantaginaceae</u>	Stomach-ache, kidney stones, kidney problems, and fever
177	सफ़ेद तिल Benne	<i>Sesamum indicum</i>	Pedaliaceae	Mildly laxative, emollient and demulcent
178	बरियार Common wireweed	<i>Sida acuta</i>	Malvaceae	Leucorrhoea, tuberculosis, diabetes, malarial and other fevers
179	बाला Flannel weed	<i>Sida cardifolia</i>	Malvaceae	Numbness, nerve pain, muscle cramps, skin disorders
180	सहदेव Jelly leaf	<i>Sida rhombifolia</i>	Malvaceae	Gastrointestinal dysentery, fevers, asthma and inflammation
181	महाबला बाला Arrow leaf	<i>Sida rhomboidea</i>	Malvaceae	Fever, heart diseases, burning sensations, piles
182	प्रसारिणी बाला Flannel weed	<i>Sida veronicaefolia</i>	Malvaceae	Treat asthma, tuberculosis, the common cold, flu, headaches,
183	बैंगन Egg plant	<i>Solanum melongena</i>	Solanaceae	Cardiac debility, neuralgia, ulcer in nose
184	जंगली भाटा Bruhati	<i>Solanum indicum</i>	Solanaceae	Dropsy, chest pain, chronic fever, colic
185	कंटकारी Yellow fruit night shade	<i>Solanum xanthocarpum</i>	Solanaceae	Infectious and degenerative diseases
186	मकोय Black night shade	<i>Solanum nigrum</i>	Solanaceae	Aching teeth, stomach ache, tonsillitis, wing worms, pain
187	काला मकोय Night shade	<i>Solanum rubraum</i>	Solanaceae	Burns, corns, cough, cystitis, fistula, prostatitis
188	आलू Irish potato	<i>Solanum tuberosum</i>	Solanaceae	Scurvy, spasms, tumors, and warts

189	बन तमाखू Mullein Nightshade	<i>Solanum verbascifolium</i>	Solanaceae	Dysentery, fever, diarrhea, digestive problems
190	पालक Spinach	<i>Spinacia oleracea</i>	Amaranthaceae	Treat stomach and intestinal complaints and fatigue
191	ज्वार Indian millet	<i>Sorghum vulgare</i>	Poaceae	Inflammation
192	शुगरलीफ Candy leaf	<i>Stevia rebaudiana</i>	<u>Asteraceae</u>	lowering blood pressure, treating diabetes, high uric acid levels
193	घमरा Coat buttons	<i>Tridax procumbens</i>	Asteraceae	Bronchial catarrh, diarrhea, dysentery and liver diseases
194	अर्जुन Arjun tree	<i>Terminalia arjuna</i>	Combretaceae	Cardiotonic in heart failure, ischemic, cardiomyopathy, atherosclerosis,
195	पीला कनेर Yellow oleander	<i>Thevetia peruviana</i>	Apocynaceae	External wounds, infected area, ring worms, tumours
196	वर्षाभू Black Pigweed	<i>Trianthema portulacastrum</i>	Aizoaceae	Analgesic, stomachic, laxative, treatment of blood disease,
197	गुडखुल Puncture vine	<i>Tribulus terrestris</i>	Zygophyllaceae	Chest pain, heart problems, dizziness, skin and eye disorders
198	गिलोय Heart-leaved moonseed	<i>Tinospora cordifolia</i>	Menispermaceae	Jaundice, chronic diarrhea, cancer, dysentery, bone fracture
199	गेहूँ Bread wheat	<i>Triticum aestivum</i>	Poaceae	Rheumatoidarthritis, hyperlipidemia, thalassemia, anemia
200	मेथी Fenugreek	<i>Trigonella foenum</i>	Fabaceae	Respiratory infections
201	मोरपंखी Chinese arborvitae	<i>Thuja orientalis</i>	<u>Cupressaceae</u>	loosen phlegm (as an expectorant), to boost the immune system (as an immunostimulant)
202	बहेड़ा Bastard myrobalan	<i>Terminalia bellerca</i>	Combretaceae	Hepatitis, bronchitis, asthma, dyspepsia, piles
203	सागौन Teak	<i>Tectona grandis</i>	Verbenaceae	Skin diseases and diarrhoea
204	इमली Tamarind	<i>Tamarindus indica</i>	Fabaceae	Dry eye, constipation, parasite infections
205	हरड़ Chebulic myrobalan	<i>Terminalia chebula</i>	Combretaceae	Increase appetite, digestive aid, liver stimulant
206	पारस पीपल Bendy tree	<i>Thespesia populnea</i>	Malvaceae	Antifertility, antibacterial, anti-inflammatory, antioxidant
207	सदाबहार Bright eyes	<i>Vinca rose</i>	Apocynaceae	Diabetes, high blood pressure

208	बचीता Congo jute	<i>Urena lobata</i>	Malvaceae	Fractures, wounds, mastitis and snake bites
109	अश्वगंधा Winter cherry	<i>Withania somnifera</i>	Solanaceae	Anxiety, cancer, microbial infection, immunomodulation
210	पीला भंगरा Pilabhamgara	<i>Wedelia chinensis</i>	Asteraceae	Cough, headache, hair loss, lice, strengthening the nervous system
211	बेर Indian Jujube	<i>Zizyphus jujube</i>	Rhamnaceae	Asthma, cough, and laryngitis, constipation, colitis
212	अदरक Zinger	<i>Zingiber officinale</i>	Zingiberaceae	Headaches, indigestion, nausea, vomiting, and cancer.
213	गेंदा African marigold	<i>Tagetes erecta</i>	Asteraceae	Calm the nerves, and reduce blood pressure.
214	बादर भेड़ Chinese date	<i>Zizyphus vulgaris</i>	Rhamnaceae	Diabetes, high levels of cholesterol or other fats (lipids) in the blood (hyperlipidemia)

Table:2 some Important photograph of site observation





Emblica officinalis



Tamarindus indica



Allium cepa



Musa paradisiaca



Syzygium cumini



Punica granatum



Citrus medica



Aegle marmelos



Tribulus terrestris



Mangifera indica



Chenopodium album



Brassica campestris



Jatropa curcas



Cyperus rotundus



Asparagus racemosus



Curcuma domestica



Zingiber officinalis



Annona squamosa



Coriandrum sativum



Cannabis sativa



Eclipta alba



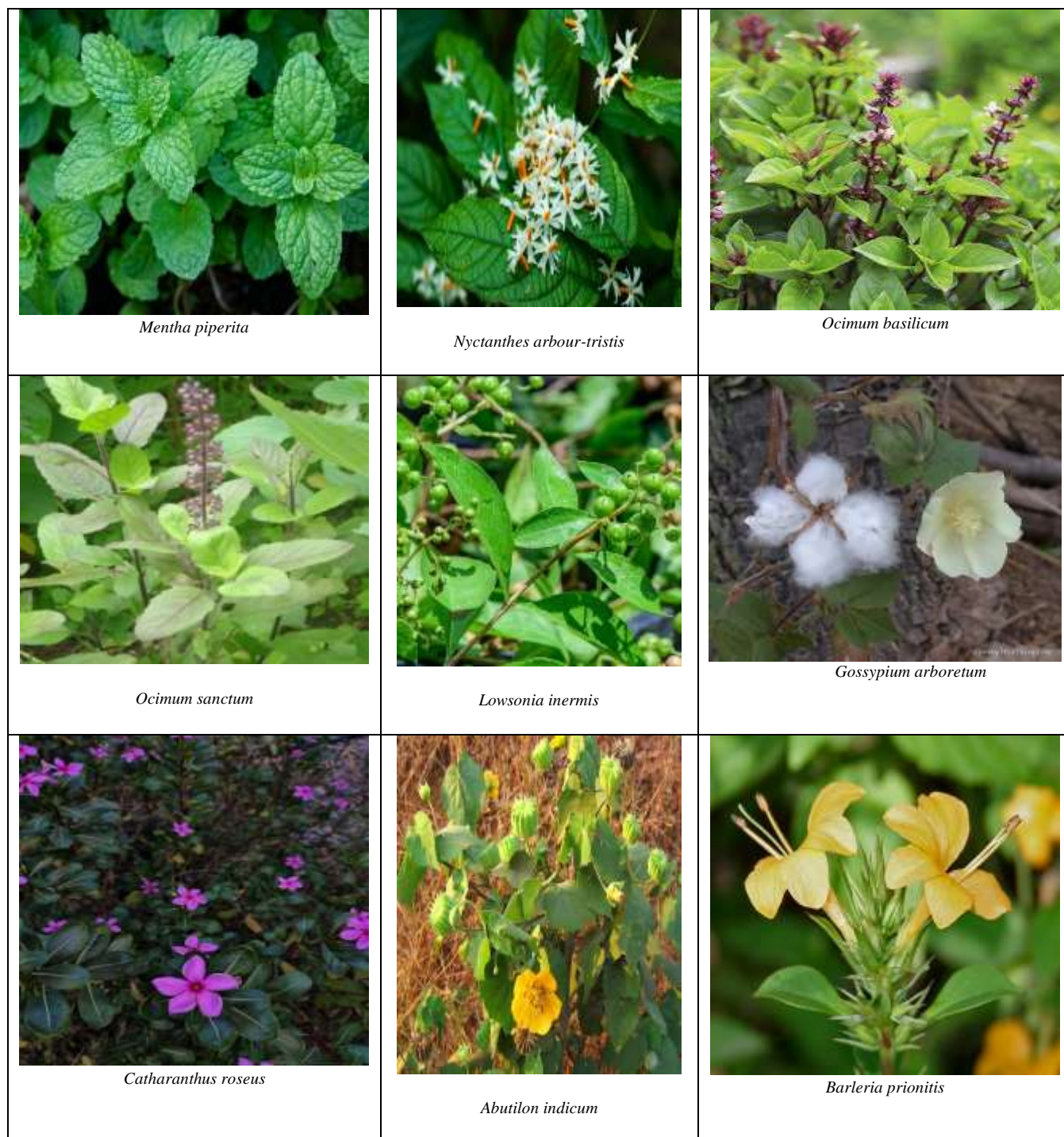
Convolvulus pluricaulis



Ricinus communis



Dalbergia sissoo



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