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# Floristic Diversity And Medicinal Flora Of Chandra Prabha Wildlife Sanctuary, Chandauli District, Uttar Pradesh

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## Abstract

Chandra Prabha Wildlife Sanctuary (CPWLS) covers an area about 9,600 ha is located in the district Chandauli of Uttar Pradesh India. Conventional drug treatments are a very vital part of Indian culture. In this examination the results of twelve months examination of ethnomedicinal make use of flora in Chandra Prabha Wildlife Sanctuary (CPWLS) region is mentioned. Data on the usage of medicinal flora had been accrued through the use of dependent interviews and thorough observations and conversations with neighborhood communities. Approximately a fifty flora belonging to forty-three households utilized by the neighborhood healers had been mentioned in this examination. The plant species with the best constancy level had been Lawsoniainermis, Dalbergiasissoo, Cassia fistula Linn.,Buteamonosperma (Lam.) Kuntze., Boerhaaviadiffusa Linn., AlbizialebbeckBenth., Aeglemarmelos Correa., Sphaeranthusindicus Linn., and SolanumsurattenseBurm. f. The maximum common illnesses mentioned had been constipation,hepatitis, jaundice, pores, and skin and urinary problems. The elements of the flora maximum often used had been fruit, roots, and complete flora (17%) accompanied via way of means of leaves (16%) and bark (15%). This examination offers new studies efforts and views at the look for new capsules primarily based totally on neighborhood makes use of medicinal flora.

**Keywords: Chandra Prabha Wildlife Sanctuary-Medicinal plants-Traditional knowledge.**

## Introduction

Plants are continually taken into consideration as a sourse of medicine in conventional and opportunity gadget of medication in diverse paperwork consisting of crude form, juice, decoction, and crude extracts. About 80% of humans globally, in particular, withinside the rural regions of growing countries, maintain the use of conventional sources in healthcare [1]. The Indian subcontinent is famed for its cultural and plant biodiversity wherein huge numbers of humans are nonetheless residing in tribes. These tribal humans own a pool of undisclosed,

ethnomedicinal, and ethnopharmacological data concerning the plant life in their surroundings, which might also additionally show to be very useful in a rural network with its advantage. The natural wealth in addition to the undisclosed ethnopharmacological data and the tribal cultures was reduced remarkably at a worrying price because of extrade in existence style, unintended developmental programs, and mounting current civilization. Negligence with the aid of using the kids additionally impacts the conventional information [2, 3]. Therefore, it's miles essential to find out and report this exceptional, original, and traditional data of the ethnic populace, earlier than it disappears with the informed persons. It is likewise to the status quo of those traditional standards to the countrywide and global degree knowing the current worldwide trends [4].There is insufficient information on the ethnomedicinal makes use of the plant in eastern Uttar Pradesh [1, 5–8] in comparison to northern and western Uttar Pradesh [9]. Further, the ethnobotanical survey targeted on Purvanchal place of estern Uttar Pradesh is fairly deficient [8]. Some of the suggested surveys are to be had for capability effectiveness of the conventional healthcare practices, alive in local and nearby groups close to natural world sanctuaries [7]. CPWLS formerly has wealthy wooded area wealth and conventional information, however, after the disappearance of the Asiatic Lion, humans from close by applied to the wooded area for her livelihood in addition to medicinal necessities. These humans discover the medicinal prosperity of the area. Sustainable use of herbal sources refers back to the system of creating stability among the limitless preference of persons and constrained herbal sources. Conservation of plant sources is of world situation due to the fact we do not know what we're dropping and what we can want withinside the future.To meet the necessities of increasing local and global markets healthcare merchandise and the desires of developing populations, huge portions of medicinal plant life are harvested from forests (de Silva 1997). Many elements pose risks to many medicinal plant lives. The threats are degradation of habitat because of increasing human activity, the decline of wooded area regions, detrimental collections of plant species, invasion of exclusive species, illnesses, overexploitation, grazing with the aid of using animals, industrialization, moving cultivation, immoderate use of fertilizers and agrochemicals, herbal and artificial calamities, etc. In India records of making use of medicinal plant life is going returned to three hundred BC, on this yr CharakSamhita, a report on natural remedies with the aid of using Charak reviews the manufacturing of 340 natural tablets and their makes use (Vedprakash 1991, Mehra et al. 2014)[10]. These natural drugs continually attracted people

because of their low value and minimum aspect effects (Bajpai et al. 2016). Medicinal plant life which can be in use historically with the aid of using rural humans for curing diverse illnesses at the moment is getting into the mainstream. Other peoples also are privy to their healing makes use of for treating diverse illnesses in addition to retaining the right fitness conditions. Protected Areas are one of the maximum extensively time-honored and realistic processes for biodiversity conservation worldwide. However, ex-situ conservation techniques consisting of plant tissue culture, seed garage, tissue banking, etc. additionally play a critical function withinside the conservation of plant genetic sources.

## Material And Methods

### Study Area

CPWLS is located in District Chandauli of Uttar Pradesh and covers a place of approximately seventy-eight km2 (Fig. 1). The place lies among the latitudes 24° 52′0′′ N to 25° 3′55′′ and 83° 03′24′′ E to 83° 22′55′′ longitudes. It changed into well-known for the Asiatic Lion from 1957 to 1970. The location has additionally been proficient with appealing herbal sceneries, picnic spots, excessive woodland, river, and exquisite waterfalls. Two waterfalls particularly Rajdari and Devdari are well-known for the picnic spot. It lies at the Naugarh and Vijaygarh hillocks at the North Slope of the Kaimur range.

The Karamnasha River, a tributary of the Ganges, flows thru the sanctuary, as does the Chandraprabha River, a tributary of Karamnasha. Raj Dari waterfall is surrounded by the aid of using woodland place, this stepped waterfall is the primary appeal factor for the tourists. Deodari waterfall is set 500 m down the flow beneath Raj Dari waterfall. Chandra Prabha dam has been built with the aid of using the Irrigation Department.ChandraPrabha dam is positioned upstream on Chandra Prabha River close to the sanctuary and is the supply of water for each of the waterfalls. The sanctuary woodland is the usually dry deciduous kind with dominant shrubby vegetation.

### Data Collection

In gift paintings, the look at substances includes medicinal plant variety of Chandra Prabha Wildlife Sanctuary. Besides the specimens amassed from the sanctuary, a few facts became additionally taken from formerly amassed specimens and associated documentation approximately the sanctuary (Maurya et al. 2015). An extensive survey has been accomplished to document the facts and the specimens have been recognized with the assistance of herbarium and posted literature.

**Identification Of Plants**

Before survey, a questionnaire was designed and pretested with five informants. Herbarium prepration was done following standred procedures[13].The photographs of the plants were taken at their locality.Identification was carried out with the help of available floras[14-16]and by the professional experts. Plant name were verified according to International plant nemeIndex[32]

**Results**

During the botanical excursion, the sanctuary location became explored for diversity and medicinal floristic variety. After important exam 92, medicinal plant life (Table 1) belonging to fifty-one households have been said with medical names, habit, existence shape, and their medicinal uses. Among those five species belong to the Pteridophyta group. Out of the general 87 Angiosperms, 7 genera and 7 species belong to monocot, and 80 species and 65 genera belong to dicot households. Fabaceae (nine species), Caesalpiniaceae (nine species), Rubiaceae (5 species), Malvaceae (5 species), and Poaceae (4 species) have been the maximum dominant medicinal plant households in the location. The medicinal plant life has been dominant in low-altitude areas. Other households are Cucurbitaceae, Acanthaceae, Asclepiadaceae, Rutaceae, Rhamnaceae, etc. The pteridophyte belongs to five households viz., Sellaginellaceae, Isoetaceae, Schizaceae, Pteridaceae, and Marsiliaceae. Monocot households have been represented through best Poaceae, Araceae, Asparagaceae, Hypoxidaceae, and Hydrocharitaceae.

**Table 1:Medicinal Flora Of CPWLS**

| S.N. | Name of the plant | Family | Habit | Life form | Local Name | Medicinal Uses | Plant parts used |
|---|---|---|---|---|---|---|---|
| 1 | *Calamariacoromandelina(L.f.)* | Isoetaceae | Herb | Cry | Quilworts | Spleen and liver disease | Corm |
| 2 | *Ceratopteristhalictroides(L.) Brongn.* | Pteridaceae | Herb | Cry | Indian fern | Skin diseases | Leaf, Root |
| 3 | *Lygodiumflexuosum*( L.) Sw. | Schizaeaceae | Climber | Ph | - | Rheumatism, sprains, scabies, eczema and cut | Root |
| 4 | *Marsileaminuta*L. | Marsiliaceae | Herb | Cry | Susnisak | Psychopathy, diarrhea, respiratory and skin | Frond |
| 5 | *Selaginellabryopteris* (L.) Baker | Selaginellaceae | Herb | Th | Sanjeevani | Anti-inflammatory and cures venereal disease | Leaf |
| 6 | *Andrographispaniculata (Burm.f.) Nees* | Acanthaceae | Herb | Th | Kalmegh | Blood purification, diarrhea, piles, jaundice, bronchitis, lever diseases. | Whole plant |
| 7 | *Barleriacristata L.* | Acanthaceae | Herb | Cha | Subhaga | Cough, bronchitis,toothache | Whole plant |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8 | *Barleriaprionitis L.* | Acanthaceae | Herb | Cha | Katsaraya | Boils, cough, cancer,tootache and rheumatism. | Whole plant |
| 9 | *Justiciaadhatoda L.* | Acanthaceae | Shrub | Ph | Adusa, Arusa | Eexpectorant, antispasmodic, in chronic bronchitis | Leaf |
| 10 | *Amaranthusspinosus L.* | Amaranthaceae | Herb | Th | Kateli-chauli | Rheumatic pain, gonorrhea | Whole plant |
| 11 | *Calotropisgigantea (L.) R.Br.* | Asclepiadaceae | Shrub | Ph | Akauva | Skin inflammation,mentaldisorders, snake bites | Leaf, flower, Root, Latex |
| 12 | *Calotropisprocera (Aiton) W.T.Aiton* | Asclepiadaceae | Shrub | Ph | Madar | Skin diseases,mouth ulcer, asthama, epilepsy, cholera, cough, cold. | Leaf, Fl, Root, Latex |
| 13 | *Gymnemasylvestre (Retz.) R.Br. ex Schult.* | Asclepiadaceae | Woody vine | Ph | Gurmar | Diabetes, asthama, cough and cold. | Leaf |
| 14 | *Asparagus racemosusWilld.* | Asparagaceae | Herb | Cry | Satawar | Nervous disorder, jaundice, diabetes, leucorrhoea, rheumatic pains. | Root |
| 15 | *CaesuliaaxillarisRoxb.* | Asteraceae | Herb | Th | Phulave | Flowers used in boils. Roots used in mouth sore. | Flower, Root |
| 16 | *Ecliptaprostrata (L.) L.* | Asteraceae | Herb | Th | Bhringraj | Elephantiasis,liver , spleen diseases, dandruff, wounds, snake bites. | Whole plant |
| 17 | *Sphaeranthusindicus L.* | Asteraceae | Herb | Th | Gorakhmundi | Leucorrhoea, eye diseases, madness. | Whole plant |
| 18 | *Tridaxprocumbens L.* | Asteraceae | Herb | Th | Mewadi | Cuts, wounds, scorpion bites,leucorrhoea. | Whole plant |
| 19 | *Oroxylumindicum (L.) Kurz* | Bignoniaceae | Tree | Ph | Arlu, Sheonak | Jaundice,bonefracture,rheumatism and snake bites. | Bark, Leaf, Root |
| 20 | *Bauhinia purpurea*L. | Caesalpiniaceae | Tree | Ph | Khairwal | Diarrhea, laxative and antihelmintic | Whole plant |
| 21 | *Bauhinia racemosa*Lam. | Caesalpiniaceae | Tree | Ph | Kachnal | Dysentery, diarrhoea. | Bark, Leaf |
| 22 | *Bauhinia vahlii*Wight &Arn. | Caesalpiniaceae | Tree | Ph | Mahurayan | Chronic stomach pain, dysentery and cholera, syphilis | Bark, Root |
| 23 | *Bauhinia variegata*L. | Caesalpiniaceae | Tree | Ph | Kachnar | Diarrhoea, toothache and mouth ulcer | Flower, Twig, Bark, Root |
| 24 | *Cassia fistula* L. | Caesalpiniaceae | Tree | Ph | Amaltas | Burn and skin diseases, Fruit in dysentery, cough, fever | Leaf, Fruit, Seed, Root |
| 25 | *Sennaobtusifolia*(L.) Irwin &Barneby | Caesalpiniaceae | Herb | Th | Panevar | Leaves used in ulcer. Roots in ringworm. | Leaf, Root |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26 | *Sennaoccidentalis*(L.) Link | Caesalpiniaceae | Herb | Th | Kasondi | Purgative, used in skin troubles. | Leaf, Seed |
| 27 | *Sennatora*(L.) Roxb. | Caesalpiniaceae | Herb | Th | Chakunda | Leaves are purgative and used in skin troubles. | Leaf |
| 28 | *Tamarindusindica*L. | Caesalpiniaceae | Tree | Ph | Imli | Ringworm, leucoderma and eye inflammation. snake bites. | Leaf, Seed |
| 29 | *Cleome viscosa*L. | Capparaceae | Herb | Th | Hurhur | Ringworm, dyspepsia, cough, bronchitis, cardiac disorders. | Whole plant |
| 30 | *Celastruspaniculatus* Willd. | Celastraceae | Shrub | Ph | Malkangni | Stimulant nerve tonic, sedative, tranquilizer,diuretic, cough and cold. | Bark, Fruit, Seed |
| 31 | *Anogeissuslatifolia*(Roxb. ex DC.) | Combretaceae | Tree | Ph | Dhaw | Bark used in diarrhoea, headache, scorpion bite, toothache | Bark, Root |
| 32 | *Terminaliaarjuna*(Roxb. ex DC.) Wight &Arn. | Combretaceae | Tree | Ph | Arjuna | Styptic, tonic, febrifuge,hypertention, ear-ache. | Leaf, Bark |
| 33 | *Terminaliabellirica*( Gaertn.) Roxb. | Combretaceae | Tree | Ph | Bahera | Fever, cold, cough, cholera | Bark, Fruit |

**Discussion**

These plant lives are said to remedy numerous illnesses along with asthma, bronchitis, tuberculosis, headache, rheumatic pains, jaundice, constipation, diarrhea, diabetes, leucorrhoea, urinary troubles, epilepsy, fever, elephantiasis, pores and skin illnesses, snake bites, cough, gummosis, gastritis, liver disorder, scorpion bites, eczema, cholera, cold, menorrhagia, boils, dysentery, sore, toothache, cardiac disorders, cancer, inflammation. And there are numerous plant species with antibacterial, antifungal, anti-inflammatory, antioxidant, laxative, antiseptic and sedative residences as additionally discovered by different workers (Yadav et al. 2012, Chakraborty et al. 2013, Srilatha&Ananda 2014, Arya et al. 2016, Choudhary& Jain 2016, Dutta et al. 2016, Singh et al. 2016, Sarkar& Devi 2017, Umadevi&Srinathrao 2017, Sundar&Habibur 2018, Venkanna et al. 2018). It became additionally a not unusual place remark that many plant life is used to deal with identical illnesses. Out of the general 121 medicinal plant species accumulated from the sanctuary the maximum typically used elements of medicinal plant life are leaves (in seventy-eight species), roots (in seventy-five species), and bark with 22 species only. The seventy-eight species of leaves consist of the plant life whose entire plant and twigs are used and seventy-five species of roots additionally consist of the plant life whose entire plant is used for healing treatment. Most of the medicinal plant life is herbs accompanied by trees, shrubs,

climbers, and vines. The examination indicated that Chandra Prabha Wildlife Sanctuary is wealthy in medicinal plant variety and it's far a pressing want to preserve them. Uncontrolled human interference in the sanctuary can also additionally result in a tremendous lack of medicinal biodiversity in the area. The conventional know-how of medicinal plant species and their healing makes use is likewise vanishing rapidly; consequently it's far crucial to examine their medicinal residences on the way to boom their conservation processes.

**Conclusion**

Herbs are constantly taken into consideration as a crucial supply of medication especially for the populace of the agricultural regions and tribes due to the excessive value and hard accessibility to fashionable medicine. This examination become performed in Chandra Prabha Wildlife Sanctuary of Chandauli district, withinside the south jap department of Uttar Pradesh, wherein insufficient ethnobotanical surveys on medicinal plant life had been performed. Our findings confirmed that the region is wealthy in biodiversity and ethnobotanical tradition. About ninety plant life belonging to forty-three households are utilized by the nearby groups together with the tribal and nearby healers. The plant species with the best constancy level had been Lawsoniainermis, Dalbergiasissoo, Cassia fistula Linn., Buteamonosperma (Lam.) Kuntze., Boerhaaviadiffusa Linn., AlbizialebbeckBenth., Aeglemarmelos Correa., Sphaeranthusindicus Linn., and SolanumsurattenseBurm. f. The most common illnesses stated had been hepatitis, jaundice, constipation, pores, and skin and urinary problems. The elements of the plant life maximum regularly used had been fruit, roots, and entire plant life (17%) observed with the aid of using leaves (16%) and bark (15%). Traditional expertise of the region is significantly affected because of modernization and different elements and there's a pressing want to shield the cultural historical past and conventional expertise of the natives with the aid of using justifying the healing ability and organic sports of the plant life with stated medical methods. Also, there's a want for unique interest in the ability plant life of the region which can be on the verge of extinction with the aid of using immoderate deforestation and development.


**Figure1.a.Location of study area (CPWLS));b-d. Vegetation of CPWLS;e. Chandra Prabha waterfall; f. Chandra Prabha dam.**

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