

Diversity Of Medicinal Plants In Kalinga University, New Raipur (C.G.)

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ABSTRACT

Many of the plants have great potential for the treatment of many diseases and are considered medicinal plants. The main aim of this study is to concentrate on the variety of medicinal plants for further conservation and utility. Chhattisgarh is recognized in India as a well plant diversity state because varieties of plants are found here. Various sections of these plants are used for cure of several diseases. Survey of plant diversity was conducted on campus of the Kalinga University, New Raipur, Chhattisgarh. Total 56 species of medicinal plants which belong to 36 families have been observed. Of the 57 medicinal plants, 17 were trees, 20 were shrubs, 16 herbs, 1 gymnosperm and 3 were climbers. It has also been pointed out that the campus of Kalinga University is rich in 7 plants of Apocynaceae and 6 plants of the family Fabaceae.

Keywords: Plant diversity; Medicinal Plants; Medicinal uses

1. INTRODUCTION

The state of Chhattisgarh has rich and unique biological diversity. As we know the plants are used in food, fodder, fuel, medicines and provide raw material for industries and construction. It has also been used in cosmetic industries as well as in pharmaceuticals industries. All over the world around 80% of the peoples utilizing about 10,000 plant species as herbal medicines for treatment of various disorders [De, 1997].

Plants contribute as source of therapeutic agents to modern medicine (Kadir et al., 1998). Herbal remedies were used from ancient times as an alternative or supplementary therapeutic tool. Nearly 70 percent of the world's population believes on herbal medicines as their primary health care type. (Sumner et al., 2000).

Kalinga University located in New Raipur, Chhattisgarh, which is rich in plant biodiversity and provides a large number of medicinal plants with their habitat. The area of University

campus is around 35 acres. Kalinga University campus containing diversity of vegetation. Botanical gardens are present in the university campus where diversity of medicinal plants are present.

The purpose of this study was to undertake a survey on the university campus to record the distribution of medicinal plants on the university campus.

2. MATERIALS AND METHODS

The research was conducted at Kalinga University, New Raipur, Chhattisgarh. The campus was visited frequently to collect medicinal plants. Freshly collected plants or plant pieces, and their digital photos were taken. A herbarium of medicinal plants was prepared in the laboratory from the collected plants and their identification was done by the following literature:

1. Review on Indian medicinal plants by A. K. Gupta (2004-2011)
2. Medicinal plants by S. G. Joshi (2000)
3. Review on Indian medicinal plants volume 1-10 by N. Tendon (2011)

After identification, plants were arranged alphabetically in the table under the following headings- Botanical Name, Common Name, Family, Medicinal Uses, Habit, Parts used. Many authors have also worked on ethnomedicinal importance of the plants. Their paper was also referred for the identification of medicinal uses.

3. RESULTS AND DISCUSSION

According to this field research report on the variety of medicinal plants at Kalinga University Campus, New Raipur. It is estimated that there are 56 species on campus, under 36 families. Collected medicinal plants displayed various herb, shrub, climber & trees habits. Table No. 1 summarizes all the recorded plants, their botanical name, common name, families, medicinal uses.

S. No.	Local Name	Botanical Name	Habit	Family	Parts Used	Uses
1	Gulmohar	<i>Denolixregia</i>	Tree	Fabeaceae	Leaves	Have hepatoprotective property, used in burning, anti-diabetic activity
2	Adhusa, Vasaka	<i>Adhatodavasica</i>	Herb	Acantaceae	whole plant	Leprosymouth troubles bronchitis, thirst, asthma, fever, vomiting, leucoderma, jaundice, tumors, blood disorders, fever, gonorrhoea, sore-eye and loss of memory.

3	Ashoka	<i>Saracaas oca</i>	Tree	Fabeaceae	Leaves, roots	As an antihelmeintic agent, eczema, scabies, ringworm, gonorrhoea,
4	Biodiesel plant	<i>Jatropha curcas</i>	Shrub	Euphorbiaceae	Leaves, Stem	Dysentery, diarrhea, and root oil extract are used.
5	Lipstick tree	<i>Bixaorellana</i>	Tree	Baxaceae	leaves, shoots	During dysentery, the infusion of leaves is used as a purgative. To treat fever, the boiled leaves (shoots) are applied to the head and body. Boiled leaves (young shoots) are used to treat sore throat as gargle.
5	Giloya	<i>Tinosporacordifolia</i>	climber	<u>Menisperma</u> ceae	root	Used to improve immune system.
6	Sago palm	<i>Cycasrevoluta</i>	gymnosperm	Cycadaceae	seed, stem, leaves	Known for treating high blood pressure, fatigue, nausea, bone pain and rheumatism. Leaves used for cancer and hepatoma treatment.
7	Cathedral bells	<i>Bryophyllumpinnatum</i>	Herb	<u>Crassulaceae</u>	leaves	Used to treat earache, burns, abscesses, ulcer, bug bites, diarrhea and lithiasis in ethno medicine
8	Aloe vera	<i>Aloe vera</i>	Herb	<u>Asphodelaceae</u>	leaves	Treating burn of skin, This one has long been considered as a remedy for blisters, including sunburns.
9	Asian pigeonwings	<i>Clitoriate rinatea</i>	Herb	Fabaceae	flower, seed	Since decades typical naturopathic medicine has been used as a memory inducer, antistress, opioid agonist, antidepressant, alpha blocker, soothing and painkiller tool.
10	Asthma-plant	<i>Euphorbia hirta</i>	Herb	Euphorbiaceae	stem, flower, leaves	Used to treat asthma and heart disease.
11	Tulsi	<i>Ocimum sanctum</i>	Herb	Lamiaceae	Leaves	Application for pharmaceutical products as antioxidants, cytoprotective, alpha blocker, hypoglycaemic, hypolipidemic, hepatoprotective, renoprotective, excitotoxic, dermatological and insecticidal.
12	Cactus	<u>Mammillaria</u>	herb	Cactaceae	Leaves,	Recommended for charred eye, edema and indigestion as ayurvedic medicine

					Fruit	
13	cowplant, Periploca of the woods, <i>gurmar</i>	<i>Gymnem asylvestr e</i>	herb	<u>Apocy naceae</u>	Leave s	Reduces the risk of developing cardiovascular disease, It is used to lower blood sugar levels and minimize sugar cravings, research shows that fat intake and lipid levels can also be reduced.
14	origano	<i>Origanu mvulgare</i>	Herb	Lamia ceae	stem, leaves	Treat Asthma, Allergy and Childhood laryngeal inflammation and trachea.
15	Pudina	<i>Mintha</i>	Herb	Lamia ceae	leaves	used to treat indigestion.
16	Rheo discolor, Moses- in-the- cradle	<i>Tradesc antiaspath acea</i>	Herb	<u>Comm elinac eae</u>	leaves	This herb can be used for chest infections, sore throat, coughing, nasal bleeding as well as for anti-inflammatory treatments.
17	Madar	<i>Calotropi sprocera</i>	Herb	Apocy naceae	leaves , stem	used for digestive disorders including diarrhea, constipation and stomach ulcers; for painful conditions including toothache
18	Herb of grace	<i>Bacopam onnieri</i>	Herb	<u>Planta ginace ae</u>	leaves	Research suggest that this can help to improve mental function, relieve systems of Attention deficit hyperactivity disorder (ADHD) and reduce stress and anxiety.
19	Hadjod	<i>Cissusqu adrangul aris</i>	Shrub	<i>Vitace ae</i>	Whol e plant	to heal broken bones and injured ligaments, tendons, diabetes, a cluster of cardiac disease risk factors called "metabolic syndrome" and high cholesterol.
20	Bird of paradise flower	<i>Strelitzia reginae</i>	Shrub	<u>Strelit ziacea e</u>	Seed, Flowe r	used to treat swollen lymph nodes and sexually transmitted diseases.
21	Bottlebru shes	<i>Callistem on</i>	Herb	<u>Myrta ceae</u>	whole plant	The various portions of this herb were used in the therapy of constipation, dysentery and rheumatism in popular cures, anticough, antibronchite, and insecticide
22	Champa	<i>Plumeria alba</i>	Shrub	Apocy naceae	Bark	Cough, bronchitis, asthma, piles of fever, dysentery, disorders of blood, healing itchy
23	Henna tree	<i>Lawsonia inermis</i>	shrub	<u>Lythra ceae</u>	root,s tem,le aves, flowe	Antioxidant, antidiabetic, hepatoprotective, hypoglycemic, antimicrobial, anticancer and wound healing properties have been found to be present.

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24	Jungle Geranium	<i>Ixoracoc cineae</i>	Shrub	Rubiaceae	root, stem, leaves, flower	treat T.B., fever, headache, bellyache.
25	Lemon	<i>Citrus limon</i>	Shrub	Rutaceae	Fruit, peel	Treat scurvy, cold and pneumonia, H1N1 (swine), ear ringing (tinnitus), Meniere's disease, stomach discomfort and pregnant diarrhoea, and kidney stones.
26	Lemon grass	<i>Cymbopogon</i>	Shrub	Poaceae	leaves	Used to treat spasms in the digestive tract, stomach ache, high blood pressure, epilepsy, nausea, coughing, creaky joints.
27	Satavar	<i>Asparagus racemosus</i>	Shrub	Asparagaceae	root, flower	Treat hormonal problems.
28	Ti Plant	<i>Cordyline fruticosa</i>	Shrub	Asparagaceae	leaves	Anti-oxidant, diuretic property
29	Babul	<i>Acacia nilotica</i>	tree	<u>Fabaceae</u>	leaves, pods, gums	anti-plasmodial, anti-microbial and antioxidant activity used for human immunodeficiency virus treatment
30	Parijat	<i>Nyctanthes arbor-tristis</i>	small tree	Oleaceae	Seed, leaves	malaria, blood dysentery, cough and gastritis, piles and skin diseases.
31	Banana	<i>Musa × paradisiaca</i>	Tree	Musaceae	Flower, peel	Treat dysentery, bronchitis and ulcers
32	Chinese chastetree	<i>Vitex negundo</i>	Tree	<u>Lamiaceae</u>	root, fruit	Tonic, febrifugal, diuretic and expectorant
33	Curry tree	<i>Murraya koenigii</i>	Tree	Rutaceae	root, bark, leaves	Used to improve blood circulation, digestion, metabolism and it has non-inflammatory acts.
34	Neem	<i>Azadirachta indica</i>	Tree	<u>Meliaceae</u>	leaves, stem	Used to improve blood circulation, digestion, metabolism and it has non-

						inflammatory acts
35	Peepal	<i>Ficus religiosa</i>	Tree	Moraceae	Leaves, bark, fruits, and seeds	Used in the treatment of asthma, diabetes, vomiting, hypertension, gastrointestinal pain, neurological disorders, infectious and sexual disorders.
36	Malabar MadhuM alati	<i>Combretum malabaricum</i>	Climber	Combretaceae	whole plant	Anthelmintic, to treat pectora and rheumatism
37	Badam, Almond	<i>Terminalia alata</i>	Tree	Combretaceae	whole plant	Anti-Carcinogens, Anti-HIV, Hepatoprotective, Anti-Diabetic and. By fact the leaves are Anti- Sickling.
38	Paper Flower	<i>Bougainvillea glabra</i>	Shrub	Nicotianaceae	leaves, flower	Anti-cancer, anti-diabetes, anti-hepatotoxic, anti-inflammatory, anti-hyperlipidemic, anti-microbial, antioxidant and antiulcer.
39	Gudhal	<i>Hibiscus rosasinensis</i>	Shrub	Malvaceae	flower	These are used to treat prolonged and painful menstruation, cystitis, venereal diseases, feverish diseases, bronchial catarrh, cough and to promote hair growth.
40	Shami Plant (Sonapatti)	<i>Bauhinia racemosa</i>	Tree	Fabaceae	Bark and leaves	Known for headache, fever, skin disease, blood disease, dysentery, and diarrhoea diagnosis.
41	Cape honeysuckle	<i>Tecomaria capensis</i>	Climber	Bignoniaceae	Bark, leaves, flower	to relieve pain and sleeplessness, to bring down fevers, to treat chest ailments such as bronchitis, to treat stomach pains, diarrhoea
42	Ticoma	<i>Tecomaria grandiflora</i>	Shrub	Bignoniaceae	Root, Bark	Stomach pain, Diuretic, tonic, anti-syphilitic, and vermifugal.
43	Chhatim Tree	<i>Alstonia scholaris</i>	Tree	Apocynaceae	Bark, leaves	The tree's roasted leaves are made into a poultice, and used on ulcers. Treat respiratory disorders.
44	Morning glory	<i>Ipomoea carnea</i>	Climber	Convolvulaceae	Leaves, Latex	used to treat skin problems and small purgative
45	Kaner	<i>Nerium oleander</i>	Shrub	Apocynaceae		Oleander seeds and leaves are used to make medicine.

46	Chandani plant	<i>Tabernaemontana divaricata</i>	Shrub	Apocynaceae		All plant parts are used in Ayurvedic, Medicine. including: antioxidant ,
47	Kadam	<i>Neolamarckiacadamba</i>	Tree	Rubiaceae		Decoction of the bark of the plant is used for gargling to treat mouth ulcers and inflammation of the gums.
48	4 o'clock	<i>Mirabilis jalapa</i>	Herb	Nicotianaceae	roots, leaves	Used for diuretic, purgative and weak purposes (wound healing). As well as having diuretic and purgative effects, the root is believed to be an aphrodisiac. It is also used in Dropsy therapy. The leaves are used for reducing inflammation.
49	10 o'clock plant	<i>Portulaca grandiflora</i>	Herb	Portulacaceae	whole plant	Hepatitis diagnosis, , swelling and pharynx pain, snake bite.
50	Red leaf plant	<i>Acalypha</i>	Shrub	Euphorbiaceae	root	Treatment of many diseases including gonorrhoea, diarrhoea, dysentery, pain in the throat, ear infections, masses, wounds, epilepsy.
51	Kaner	<i>Cascabela thevetia</i>	Shrub	Apocynaceae	Bark, leaves	Known as an emetic and an effective treatment for intermittent fevers.
52	Babul Plant	<i>Vachellia nilotica</i>	Tree	Fabaceae	Bark, leaves	Plant stem used as tooth brush
53	Canna	<i>Canna indica</i>	Shrub	Cannaceae	Leaves	Tonsill, diarrhoea, to make healthy gums.
54	Aak	<i>Calatropisprocera</i>	Shrub	Asclepiadaceae		Indigestion ,stomachulser
55	Khajur	<i>Date palm</i>	Tree	Arecaeae	seed	Snow, flu, cystitis, oedema, cough, bronchial catarrh, hepatic cancer, low sperm count and abdominal disorders.
56	Mango	<i>Mangifera indica</i>	Tree	Anacardiaceae	whole plant	Reduce anxiety and nervousness, and improve sleep.
57	Madhavilata	<i>Hiptage benghalensis</i>	Climber	Malpighiaceae	Leaf	Treatment of various diseases such as sensation of burning, burns, ulcers, inflammations, leprosy, scabies, cough and rheumatism.

This report shows that the most dominant family is Apocynaceae of those 7 plants and then the Fabaceae family is the second largest plant family of this campus, of which 6 plants were recorded. Present research gives a detailed account of the Kalinga University campus medicinal plant which displays high plant diversity on the campus. The Kalinga University has also protected the natural habitat of several endangered plant species.

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