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DIVERSITY OF MEDICINAL PLANT FLORA OF JSSCACS, MYSURU

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ABSTRACT

Medicinal plants have been used traditional practices since ancient times. Plants synthesise hundreds of chemical compounds which is used by pharmaceutical industries. JSSCACS is having good source of medicinal plants garden. In this paper around 83 medicinal plants have been interpreted which include Botanical name, family, part used, habit and medicinal uses of the plants, extract medicine from the plants which are most effective, which further use in medicinal and pharmaceutical industries to cure various disease.

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INTRODUCTION

Indian herbs are known all over the world for the medicinal properties. About 90% of the herbs and medicinal plants in India are collected from the forest. Medicinal plants play a central role, not only as traditional Medicines used in many countries, but also as trade commodities which meet the demand of distant market. According to World Health Organization estimate, approximately 80% indigenous populations in developing countries depend on traditional medicine for their primary health care by use of medicinal plants (12).

Mysore area flora is quite rich and diverse with 1601 species of flowering plants belonging to 170 families and 778 genera (6). Several species of medicinal plants are also seen in the sanctuary. The most notable ones are *Hemidesmus indicus, Asparagus racemosus, Trichodesma indicum, Tinospora cordifolia, trianthema portulacastrum, Alangium salvifolium, Gymnema sylvestre, Acalypha indica, Phyllanthus fraternus, Boerhavia diffusa, Bacopa monnieri,* and *Cynodon dactylon.*

JSS College of Arts, Commerce and Science, Ooty Road, Mysore which was started in 1964 is one among more than 350 institutions run by JSS Mahavidyapeetha. The college is an autonomous College of University of Mysore. To be known as an institution providing need-based, skill-integrated, cost- effective, quality and holistic education, transforming the students into globally competitive, employable and responsible citizens and to be recognized as a centre of excellence. The present work is carried to enlist the medicinal plants in the campus which include herbs, shrubs, trees and climbers. The work is carried out to identify, report the different vegetation and isolate medicinal plants in JSSCACS.

MATERIALS AND METHODS

The flora is prepared based on the repeated visit to the garden. Regular flied visit have been conducted during 2018-19 in different seasonal for different plant specimens. The plant were identified based on characters with the help of standard flora (3). Identified plant specimens have been arranged alphabetically with their respective family, binomial name, and vernacular name. The families are arranged according to Bentham and Hooker's system of classification (1).

RESULTS

In the study reveals around 88 medicinal plants have been identified and documented. Among obtained plant species 28 trees, 9 shrubs, 42 herbs and 4 climbers were recorded. (Table 1)

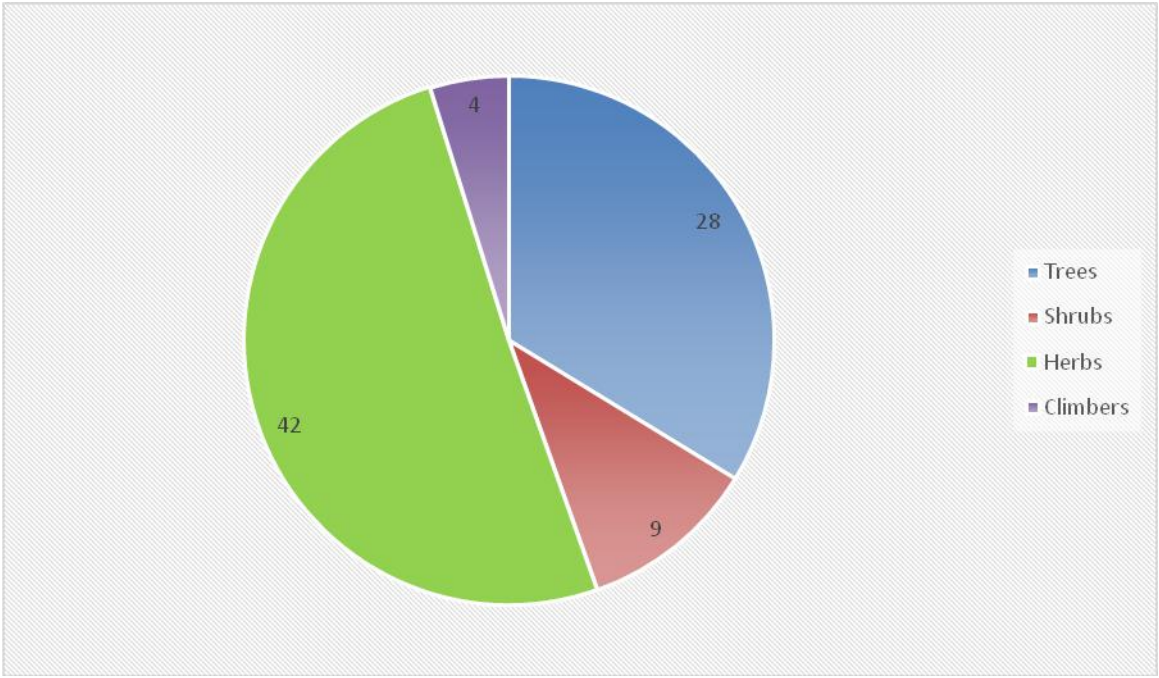

Figure 1: Habitwise uses of plant parts.

Table: 1: List of plant species in JSSCACS, Medicinal garden.

Sl.no	Botanical name	Family	Local names	Medicinal uses	Part used	Habit
1	*Abrus precatoris*	Fabaceae	Gulaganji	Cold, Cough and fever	Seeds	T
2	*Acorus calamus*	Acoraceae	Baje	Rheumatism, rheumatic fever and inflamed joints	Rhizome, stem	H
3	*Acalypha indica*	Euphorbiaceae	Ilikivi soppu	Skin diseases	Leaves	H
4	*Adhatoda vasica*	Acanthaceae	Adusoge	Ailments of respiratory tract	Whole plant	H
5	*Aerva lanata*	Amaranthaceae	Bili himdi soppu	Cough, asthma, headache	Leaves	H
6	*Alangium salvifolium*	Cornaceae	Ankola	Wound healing, dog bites	Leaves	T
7	*Aloe barbendensis*	Liliaceae	Aloevera	Treatment of pimples, acne and mouth ulcers	Whole plant	H
8	*Alpino galangal*	Zingiberaceae	Rasna	Indigestion, colic and dysentery	Rhizome	H
9	*Andrographis paniculata*	Acanthaceae	Nelabevu	Cardiovascular disease, diabetes, hypertension	Whole plants	H
10	*Asclepias curassavica*	Apocynaceae	Blood flower	Haemostatic in bleeding wounds Warts,	Whole plant	H
11	*Asparagus racemosus*	Asparagaceae	Satavari	Cough, and bronchitis and skin diseases	Roots	C
12	*Azadirachta indica*	Meliaceae	Bevu	Head lice, fever, rheumatism, asthma, worm infestations, insecticide	Whole plant	T
13	*Bacopa monneri*	Plantaginaceae	Brahmi	Nervous system , hypotensive, improve mental alertness	Roots	H
14	*Boerhavia diffusa*	Nyctaginaceae	Punarnava	Stimulates urine secretion and discharge , intestinal worms	Roots	H
15	*Basella alba*	Basellaceae	Basale soppu	Gastric, ulcer healing	Leaves	C
16	*Bryopyllum pinnatum*	Crassulaceae	Kandukalinga	Diabetes, kidney stones, insect bites	Leaves	H
17	*Calotropis gigantean*	Asclepiadaceae	Ekka	Leaves for ashtama, twig for abortion as colic, cough	Flowers, latex, leaves	S
18	*Catharanthus roseus*	Apocynaceae	Sadhapushpa	Burns, insect bites, brain health	Flowers	H
19	*Cascabela thevetia*	Rubiaceae	Karaveera	Loosen the bowels	Leaves	S
20	*Cissus quadrangularis*	Vitaceae	Sanduballi	Strength bones, joints	Stem	H
21	*Citrus lemon*	Rutaceae	Gajhanimbe	Digestive, stomachic, laxative, antiseptic, mosquito repellent	Fruits	T
22	*Clitoria ternatea*	Fabaceae	Shankapushpa	Insect bites and skin diseases Asthma, inflammation	Flowers, Roots	T
23	*Chromolaena odorata*	Asteraceae	Tivragandha	Wound healing, burns and skin infection	Leaves	H
24	*Centella asiatica*	Apiaceae	Ondalaga	Leprosy treatment, stones Promotes memory	Leaves	H
25	*Coffea arabica*	Rubiaceae	Coffee	Bitter, Diuretic, Aromatic , Migraine	Seeds	S
26	*Colocasia esculenta*	Araceae	Taro	Antibacterial , Promote menstruation	Leaves	H
27	*Curcuma longa*	Zingiberaceae	Arashina	Heartburn, Joint pain, stomach pain, Headache, ringworm	Whole plant	H
28	*Cymbopogon citratus*	Poaceae	Majjige hullu	Digestive problems, Aromatic, Insect repellent	Whole plant	H
29	*Cynodon dactylon*	Poaceae	Garike	Laxative, coolant, expectorant	Whole plant	H
30	*Euphorbia hirta*	Euphorbiaceae	Asthma weed	Fever, gas, itch, and skin conditions	Whole plant	H
31	*Eclipta prostrate*	Asteraceae	Bringa	Hair loss, skin disease	Whole plant	H
32	*Eryngium foetidium*	Apiaceae	Kadu kottambari	Antimalarial , Laxative, Fevers, head colds, Stomachic,	Whole plant	H
33	*Ficus benjamina*	Moraceae	Jaawa atthi	Skin disorders, piles, vomiting	Fruit	T
34	*Ficus religiosa*	Moraceae	Ashwatta	Cough, shin disease, nausea	Leaves, Fruits	T
35	*Foeniculum vulgare*	Apiaceae	Sompu	Carminative, digestive	Fruits	H
36	*Gymnema sylvestre*	Apocynaceae	Madhunaashini	Anti-inflammatory, Digestive, Liver tonic Diuretic, stomach ache	Leaves, roots	H
37	*Hamelia patens*	Rubiaceae	Firecracker bush	Stomach ache, snake and scorpion	Leaves	S

				bites		
38	*Hibiscus rosa sinensis*	Malvaceae	Dasavala	Skin diseases, Fever, Fertility treatments	Whole plant	S
39	*Hemidesmus indicus*	Apocynaceae	Sogadeberu	Appetite loss, dyspepsia, fever, skin diseases, Chronic coughs	Roots	H
40	*Hydrocotyle vulgaris*	Araliaceae	Pennywort	Nervous problem, leprocy	Leaves	H
41	*Ixora coccinia*	Rubiaceae	Kisukare	Hypertension, Headache	Flowers	S
42	*Jacobaea maritama*	Bignoniaceae	Dusty miller	Eye aliments	Leaves	H
43	*Jasminum officinale*	Oleaceae	Jasmine	Paralysis, Flatulence, Leprosy, Skin diseases	Flowers, leaves	T
44	*Justicia betonica*	Acantaceae	Kaadu kanakambra	Constipation, malaria, snake bite	Leaves	T
45	*Lawsonia inermis*	Lythraceae	Henna	Coloring agent, wound healing	Leaves	T
46	*Mimosa pudica*	Fabaceae	Touch me not	Heels cuts and wounds in animals	Whole plant	H
47	*Michelia champaca*	Magnoliaceae	Sampige	Digestive, carminative	Flowers	T
48	*Melissa officinalis*	Lamiaceae	Lemon balm	Digestive, carminative, sedative	Leaves	H
49	*Mentha piperita*	Lamiaceae	Pudina	Abdominal pain , Carmative , Indigestion and relive colic pain	Whole plant	H
50	*Morinda citrifolia*	Rubiaceae	Noni	Diabetes, high blood pressure, Viral and bacterial infections	Fruits	T
51	*Morus alba*	Moraceae	Mulberry	Diabetes, high cholesterol level	Fruit	S
52	*Murraya koenigii*	Rutaceae	Curry	Acrid, astringent, cooling, aromatic, demulcent, Febrifuge, stomachic	Whole plant	T
53	*Murraya paniculata*	Rutaceae	Kadu karibevu	Antidote for snake bite	Stem	T
54	*Myristica fragrans*	Myristicaceae	Nutmeg	Cramps, flatulance	Seed, Mace	T
55	*Nerium oleander*	Apocynaceae	Gangle	Scabies,eye disease , Diabetes	Leaves	T
56	*Nyctanthes arbor-tristis*	Oleaceae	Parijatha	Laxative, Anti-inflammatory , Natural kajal	Flowers, leaves	T
57	*Ocimum sanctam*	Lamiaceae	Tulasi	Cold, fever, bronchitis and cough	Whole plant	H
58	*Piper betel*	Piperaceae	White betel	Carminative, stomachic, aromatic Menstrual pains	Leaves	C
59	*Piper longum*	Piperaceae	Hipli	Cough, branchites	Fruits	H
60	*Plectranthus amboinicus*	Lamiaceae	Dodda patre	Cough, fever, skin disease	Leaves	H
61	*Phyllanthus emblica*	Ephorbiaceae	Bettada nelli	Treat constipation, reduce cough, purify blood	Fruits	T
62	*Pongemia pinnata*	Fabaceae	Honge	Cleaning teeth, strengthening gums, Diarrhea, Cough	Roots, leaves	T
63	*Plumeria alba*	Apocynaceae	Red devagangle	Ulcers, skin diseases and scabies	Flowers	T
64	*Plumeria rubra*	Apocynaceae	White gangle	Gastropathy and vitiated conditions of vata and kapha	Flowers	T
65	*Prosopis cineraria*	Fabaceae	Shami	Asthma, cough, bronchitis	Bark	T
66	*Punica grantum*	Punicaceae	Pomegranate	Vomiting, and eye pain	Fruits, leaves, seed	T
67	*Russelia equisetiformis*	Plantaginaceae	Kenjige	Malaria and inflammatory	Whole plant	H
68	*Ruta graveolens*	Rutaceae	Nagadhali	Bug bite, Cold, fever, snakebite Earache, toothache	Leaves	H
69	*Salvia officinalis*	Lamiaceae	Sage	Rhematism, paralysis	Leaves	H
70	*Santalum album*	Solanaceae	Sandalwood	Jaundice, cough, bronchitis, Dysentery Skin complaints	Wood	T
71	*Saraca asoca*	Fabaceae	Ashoka	Stomachalgia, Pitta, Burning sensation Scabies in children	Leaves, bark, flowers	T
72	*Sauropus androgynous*	Phyllantaceae	Chakramuni	Weight loss	Leaves	S
73	*Scaevola sericea*	Goodeniaceae	Sea lettuce	Indigestion, Headache	Leaves	H
74	*Solanum nigrum*	Solanaceae	Wild eggplant	Condiment, Treatment of piles, Dysentery, Abdominal pain, inflammation of bladder	Stem, leaves Fruits	H

75	*Solanum xanthocarpum*	Solanaceae	Ratrirani	Cough, cold, indigestion	Fruit	H
76	*Tabernaemontana divaricate*	Apocynaceae	Nandibatlu	Cooling and fragrant and are useful in burning sensation	Flowers	S
77	*Tinospora cardifolia*	Menispermaceae	Amruthaballi	Treat fever, cholera, diabetes, rheumatism	Whole plant	H
78	*Tectona grandis*	Verbinaceae	Teak	Burning sensation, diabetes leprosy and skin diseases	Wood	T
79	*Urtica dioca*	Urticaeae	Kadu chuchukana gida	Reduce nasal inflammation and ease allergy symptoms	Root, leaves	H
80	*Vitex negundo*	Lamiaceae	Lacky gida	Growth of hair, used in asthma, bronchitis, inflammations, eye diseases	Whole plant	T
81	*Vitis vinifera*	Vitaceae	Grapes	Constipation, skin and eye infection	Fruit	T
82	*Withania somnifera*	Solanaceae	Ashwagandha	Asthma, diabetes, hypertension, fever, cold	Root	H
83	*Zingiber officinalis*	Zingeberacaeae	Shunti	Cough, common cold, fever, respiratory troubles, pain, headache, backache	Rhizome	H

DISCUSSION

There are many herbs which are predominantly used to treat cardiovascular problems, liver disorders, central nervous system, digestive and metabolic disorders. Herbal remedies play a fundamental role in traditional medicine where the plants often used as therapeutic agents as antiseptic, anti-inflammatory and in treatment of infections, diseases including candidiasis and dermatophytes (8). Traditional medicine using plant extracts continues to provide health coverage for over 80% of the world's population, especially in the developing world (12)

Some of the medicinal plants reported in this paper work have been reported in different papers previously in different methods, for example, *Euphorbia hirta* is used for curing septic ulcer in the nail corner of toes and increase mother milk after delivery (4) (9). Ayurvedic formulation Sarasvata Choorna, which contains sweet flag, is commonly used to treat epilepsy, hysteria and as a brain tonic (7). The roots of *Cymbopogon* are taken to induce sweating, increase flow of urine, and treat coryza and influenza (5). Aerial parts of oscimum species from western Himalayas is a very good source of minerals and other phytochemicals which are having therapeutic potential (2). *Asparagus racemosa* in frigidity and sexual weakness (10), plant contains asparagusic acid which is nematocidal and is used in the treatment of schistosomiasis (11).

As the biodiversity conservation has become the most important factor for sustainability, it is important to grow and know each plant growing conditions so that we can protect them from going district.

CONCLUSION

The study found that the plants documented from the campus are having high economic and medicinal uses. The documentation of the plants are the only way for the preservation of knowledge of plants and it is useful for students and faculties. The therapeutic value of the 83 listed plants having an important role further to evaluate and screening for phytochemicals to produce new herbal drugs.

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