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Floristic Studies on Karekura Village, Srirangapatna Taluk, Mandya District, Karnataka

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Abstract: A total of 133 species spanning 119 genera and 46 families have been identified in the Karekura village, Srirangapatna taluk, Mandya district, Karnataka. Dicotyledons make up 40 families, 103 genera and 108 species. There are 6 families, 14 genera and 14 species represented by monocotyledons. The Asteraceae family, which has 15 species is the most prevalent family out of the 46 families gathered. 16 of the 119 genera in the collection have more than two species that are dominant. For its potential sustainable use in the future, the accessibility and distribution of specific plant species have undergone rigorous examination. According to the study, the majority of the plants identified in the village of Karekura are known to have therapeutic properties.

Keywords: Karekura village, Medicinal plants, Flora, Dicotyledons and Monocotyledons.

I. INTRODUCTION

In Spite of the fact that India has several heritage sites, Srirangapatna is one of the most well-known historical and heritage sites. Srirangapatna is a town municipal council and taluk administrative center in Mandya district, Karnataka, India. It is an island settlement that was established in 894 AD and is surrounded by the Cauvery River on the Bangalore-Mysore highway (Shankar and Uma, 2012).

The location code or village code of karekura village is 614283, according to data from the state of Karnataka's 2011 Census. The karekura village locality's pin code is 571438. Karekura village is found in the Srirangapatna taluk, Karnataka state of India's. It is located 35km from the district headquarters of Mandya and 11 km from the sub-district headquarters of Srirangapatna taluk and Hosahalli is the Gramma Panchyat for the hamlet of Karekura village as of the year 2009. The village covers an area of 81. 84 hectares in total.

A 1000 year old temple honoring lord Sriranganatha is the source of the name Srirangapatna. The Deccan plateau town, with an area of 8.6 square kilometers, is situated at 12.41° N and 76.7° E, with an average elevation of 679 meters 2227 feet (Fig 1). The weather is warm and fluctuates between 14°C to 34.5° C. Maximum annual rainfall was 810 mm, while minimum annual rainfall was 217mm. The soil vary from red sand loams to red clay loams, which are somewhat thick in the valley areas and very thin in ridges and higher elevations. Sriangapatna is the closet town to karekura village for all significant economic activities and is located 9 kilometers distant.

II. MATERIALS AND METHODS

The floristic study was conducted in the Karekura village of Srirangapatna taluk in the Mandya District (Fig.1). Floristic region was moist deciduous and dry deciduous type of vegetation was rich and abundant.

The study were carried out from 2019 to 2020 and cover the majority of species in flowering and fruiting stage. Plants were photographed and collected while field observation was being conducted. Using customary herbarium methods, the materials were collected and poisoned [Jain and Rao, 1977].

The collected plants were preserved with voucher number are kept in the herbarium center P. G. Department of Botany, Yuvaraja's College, University of Mysore, Mysuru. With the use of floras and regional floras collected plant specimens were identified [Gamble & Fischer, 1967; Saldanha and Nicolson, 1967]. Bentham and Hooker's classification approach is used to order the families [Bentham & Hooker, 1&3].

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Figure- 1: Location of Karekura village in geographical space.

III. RESULTS

A total of 133 species spanning 119 genera and 46 families have been identified in the current inquiry. Of these, 108 species (88.5%), and 40 families (80.95%) are dicotyledons. The monocotyledons comprise 14 genera with 11.7%, 14 species with 11.14 species with 11.4% and 6 families (13.3%). The examination of the documented behaviors of the gathered plants revealed that there are 82 species in total, with herbs making up the majority (61.6%), followed by shrubs with 31 species (23.3%), and trees with 17 species (12.7%) shown in the (fig 2). Asteraceae, one of the 46 families, has the most species (15), followed by Fabaceae (12), Malvaceae (9), Solanaceae and Poaceae (7), Rubiaceae, Apocyaaceae, Euphorbiaceae (6), Amaranthaceae, Convolvuaceae, Lamiaceae (5 species), and Acanthaceae (4 species), among others. Families with three species each include the Cucurbitaceae, Araceae, Oleaceae, verbenaceae, Phyllanthaceae, Ongraceae, Myrtaceae, Apiaceae, Oxallidaceae, Cupressaceae and Rutaceae families each share two species. Amaryllidaceae, Agavaceae, Aspargaceae, Basellaceae, Balsaminaceae, Cannaceae, Capparaceae, Cistaceae, Sapindaceae, Caricaceae, Cleomaceae, Lyrthaceae, Moraceae, Muntinigaceae, Nelumbonaceae, Violaceae, Zygophyllaceae, Polygonaceae, Piperaceae, Portulacaceae, Cyperaceae, Rosaceae and Fagaceae each have a species. (Tables 1). The research discovered that the plants identified from the region around the village are crucial to the local economy. Few of them are edible, while others have medicinal, decorative or both values. The essential understanding of biodiversity can only be preserved through plant record keeping.

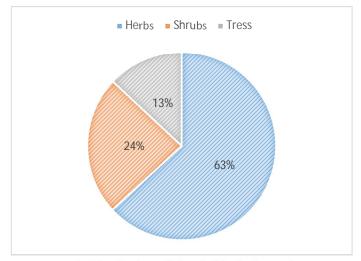


Figure-2: Distribution of Plant habits in the study area.



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IV. DISCUSSION

Our findings suggest that shrubs might be helpful to maintain vegetation and reduce erosion along roadside. Roads are artificial urban corridors that constitute a crucial component of urban infrastructure [Ranta *et al.*, 2015]. The biodiversity, pleasure, and esthetic value of roadside plants as an essential part of urban green areas [Rowntree, 2015]. Deforestation and overgrazing were the two main threats identified. The majority of indigenous healers, especially Vaidya's, preferred together medicinal herbs in secret, often with the help of their chosen family members [Dokos *et al.*, 2009]. The majority of plants are utilized locally for treating a variety of ailments and have therapeutic properties. Due to industrialization, the younger population is more reliant on allopathic medications for the treatment of various issues because they offer quicker relief than Ayurveda, however Ayurvedic medications have far fewer adverse effects than allopathic medications. [Savithramma *et al.*, 2007].

According to an all-India coordinated project conducted by the Ministry of Environment and Forest, New Delhi, just 10% of these medicinal plants may prove to be a potential source of novel pharmaceuticals, while 40% of flowering plants in India are known to have ethno medicinal value [Sandhya et al., 2006]. According to our study, the majority of plant remedies used to treat a particular condition were made from blends of various plant species. The plant species were utilized either on their own or in conjunction with other species including *Hibiscus rosa-sinensis*, *Leucas aspera* and *Azrdirachta indica*. It is said that the majority of the plants were utilized to treat human illnesses. Regular assessment and the maintenance of traditional knowledge are very much required for the creation of a database on the availability of the plant species. It is significant that there are readily available plants in karekura village that can improve a variety of dietary practices and nutritional value, supporting both the well-being of the person and the community.

V. CONCLUSION

The current study highlighted the karekura village's richness of medicinal plants. This area displays shrubs, herbs, trees, and climbers that have a high therapeutic value. The uses of edible species can be consumed every day to meet the nutritional needs of urban households. The nutritional benefits of the therapeutic plants point to potential new career paths for the next generation. To close gaps in the pharmaceutical industry, additional research linked to the estimation of growth rate and sustainable harvesting techniques of these priceless medicinal resources might be launched. More research needs to be done to examine the whole floral spectrum of karekura village and conservation plans for the plant species that are less frequency available need to be developed. In the absence of such circumstances, the extinction of that specific plant species might occur.

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(Table 1). Family, Botanical Name, Common Name and medicinal uses.

Family	Botanical name	Common name	Medicinal uses
Acanthaceae	Asystasia gangetica	Ganges violet.	Heart problem, fever, epilepsy, stomach pains.
	Crossandra infundibuliformis	Fire cracker flower.	Fever, headache, toothache, syphilis.
	Justicia betonica	Squirrel tail.	Vomiting, constipation, diarrhea, headache.
	Thunbergia erecta	King's mantel	Insomnia, depression, anxiety management.
Agavaceae	Agave Americana	Agave	Ascites, diarrhea, skin disease.
Amaranthaceae	Achyranthes aspera	Prickly chaff flower.	Antifertility in women, ear complaints, insect bites.
	Althernanthera sessilis	Sessile jolly weed.	Eye trouble, hepatitis, hernia, hair tonic.
	Amranthus retroflexus	Pigweed.	Astringent, profuse menstruation, intestinal bleeding, diarrhea.
	Amaranthus spinosus	Prickly Amaranth	Blood purifier, cough, cold, snake bite.
	Althaea officinalis	White mallow.	Skin irritation, healing wounds, ulcers.
	Celosia argentea	Periwinkle.	Haemorrhoid bleeding, uterine bleeding, dysentery.
Amaryllidaceae	Hippeastrum puniceum	Easter lily	Stomach ache, asthma, vomiting.
Apiaceae	Centella asiatica	Indian Pennywort.	Leucorrhoea, nervous disorder, fever.
	Foeniculm vulgare	Sweet fennel.	Abdominal, diuretic, stomach pain, indigestion.
Apocyanaceae	Cascabela thevetia	Yellow oleander.	Emetic, fever, heart disease, blood pressure.
	Catharanthus roseus	Periwinkle.	Diabetes, helminthiasis. Malaria, leukemia, Hodgkin's lymphoma.
	Nerium oleander	Kanigale.	Ulcers, leprosy, abscesses, hemorrhoids.
	Tabernaaemontana divaricate	Crape jasmine.	Snake bites, hypertension, headache, scabies, abdominal complaints.
Araceae	Colocasia esculenta	Cocoyam.	Skin sores, blisters, cuts and wounds, pharyngitis.
	Cocos nucifera	Coconut.	Bladder ailments, aphrodisiac, rheumatism.
	Dypsis lutescens	Areca Palm.	Wounds, burns, skin surgery, ulcers.
Asclepiadaceae	Asclepias curassavica	Scarlet Milkweed.	Skin ulcer, ringworm, dermatitis, sores.
	Calotropis gigantea	Ekka	Leprosy, syphilis, ulcer, dysentery, rheumatism.



Asteraceae	Ageratina aromatica	Smaller white snake root.	Diaphoretic, diuretic, nervous disorder, pulmonary disease.
	Bidens pilosa	Beggar Tick.	Digestive disorder, toothache, ulcers, diabetes.
	Chrysanthemum morifolium	Garden mum.	Head ache, sore eyes, heart disease, sedative.
-	Emilia sanchifolia	Purple Sow Thistle.	Diabetes, diarrhea, toothache.
-	Galinsoga parviflora	Quick weed.	Skin inflammation, Ethiopia,
-	Helianthus annuus	Sunflower.	Astringent, diuretic, swelling, snake bites.
-	Matricaria recutita	Chamomilla.	Skin disease, insomnia, and carminative.
	Mikania scandens	Climbing Hempweed.	Wound healing, coughs, gastric, Anti-inflammatory.
-	Sphagneticaola trilobata	.Yellow Dots.	Chest colds, colds.
	Synedrella nodiflora	Cinderella Weed.	Epilepsy, anticonvulsant, wounds, swelling.
	Tagetes erecta	Marigold.	Anti-hemorrhagic, bleeding, eye disease.
	Tagetes tenuifolia	Lemon marigold.	Snake bites, stomach flu, constipation, indigestion.
	Tithonia diversifolia	Giant Mexican Sunflower.	Anti-inflammatory, gastrointestinal, skin disease.
_	Tridax procumbent	.Tridax Daisy.	Blisters, eczema, leprosy, toothache, ulcers.
	Xanthium strumarium	Common Cocklebur.	Boils, piles, ringworm, toothache.
Balsaminaceae	Impatiens balsamina	Karnakudala.	Diuretic, joint pains, skin problem, wounds.
Basellaceae	Basella alba	Indian spinach.	Constipation, syphilis, ulcer in nose.
Cannaceae	Canna indica	Wild canna.	Fever, gonorrhea, diuretic, dermatomes.
Capparaceae	Capparis spinosa	Alpine caper brush.	Liver and kidney disease, paralysis, diabetes, mental disorder.
Caricaeae	Carica papaya	Papaya.	Anthelmintic, blood pressure, digestive disorder.
Cistaceae	Helianthemum apennium	White rock rose.	Stress, syphilis, opthalmia, tumors, ulcer.
Cleomaceae	Cleome viscosa	Asian spider flower.	Anthelmintic, boils, check pus formation.
Convolvulaceae	Evolvulus alsinoides	Dwarf Morning Glory.	Aphrodisiac, asthma, bronchitis, dysentery, fever.



	Ipomoea hederifolia	Scarlet morning glory.	Anti-cancer, anti-inflammatory, anti-oxidant.
	Ipomoea batatas	Sweet potato.	Anti-diabetic, treat measles.
	Ipomoea carnea	.Bush Morning Glory.	Anti -cancer, anti-inflammatory, skin problem.
	Ipomoea obscura	.Obscure Morning Glory.	Dysentery, treat aphthae, treat sores.
Cucurbitaceae	Citrullus lanatus	Watermelon.	Dropsy and renal stone, intestinal inflammation.
	Cucumis melo	Muskmelon.	Scrotal hernia, skin problem, burns and abrasions.
	Ecballium elaterium	Squirting cucumber.	Edema, kidney problem, heart problem, rheumatism.
Cupressaceae	Cupressus lusitanica	Mexican white cedar.	Headache, cancer, rheumatism, skin disease.
	Thuja occidentalis	Northern white-cedar.	Respiratory problem, headache, cough, diuretic.
Cypperaceae	Schoenoplectus lacustris	Bulrush	Astringent, diuretic, cancer.
Euphorbiaceae	Euphorbia heterophylla	Wild Poinsettia.	Constipation, stomach ache, antiplasmodial.
	Euphorbia hirta	Asthma Weed.	Burns, cough, cuts, excess lactation, kidney disease.
	Euphorbia pulcherrima	Poinsettia.	Toothache, allergic, skin disease, arthritis, ulcers.
	Jatropa curcas	.Barbados nut.	Paralysis, skin trouble, jaundice.
	Mercurialis annual	Annual mercury	Emetic, emollient, purgative, gall bladder and liver.
	Ricinus communis	Castor bean.	Boils, burns, contraceptive, dropsy, heat stroke.
Fabaceae	Caesalpinia pulcherrimma	Peacock flower.	Body ache, gum trouble, ring worm.
	Cajanus cajana	Congo pea.	Stomach pain, constipation, blood sugar.
	Chamaecrista mimosoides	Feathered-leaved cassia.	Dysentery, stomach pains, uterus problem.
	Laburnum anagyroides	Golden chain.	Vomiting,
	Macroptilium atropurpureum	Purple bush-Bean.	Skin problem,
	Phaseolus vulgaris	Hurali kayi.	Kidney and heart ailments, diarrhea, weight loss and obesity.
	Pongamia pinnata	Pongam tree	Blood dysentery, skin disease, bleeding hemorrhoid.



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	Pueraria phaseoloides	Tropical kudzu.	Ulcers, swelling.
	Senna corymbosa	Senna.	Laxative, Constipation, chronic stomach ache.
	Spartium junceum.	Spanish broom.	Laxative, emetic, cardiotonic heart arrhythmias, gallstone.
	Tipuana tipu	Tipu tree.	
	Vigna radiata	Moong bean.	Paralysis, rheumatism, liver aliments, heart stroke.
Fagaceae	Quercus ilex	Hollyoak.	Skin problem, hemorrhoids, dysentery.
Lamiaceae	Leucas aspera	Common leucas	Scabies, poisonous bites.
	Mentha spicata	Spearmint.	Cold, diuretic, digestive disorder, cancer.
	Ocimum basilicum	Basil.	Cholera, cough, earache, fever, headache.
	Plectranthus amboinicus	Indian borage.	Nasal congestion, rheumatism, swelling.
	Thymus vulgaris	Common thyme.	Stomach ache, arthritis, sore throat, diarrhea.
Lyrthaceae	Cuphea hyssopifolia	Mexican heather.	Antioxidant, fever, coughs.
Malvaceae	Abutilon indicum	Indian Mallow.	Cough diarrhea, dysentery, leprosy and stomach complaints
	Althaea officinalis	White mallow.	Gastric ulcer, skin irritation, inflammation, wound healing.
	Cebia pentandra	Kapok.	Treat asthma, scabies, coughs, and headache.
	Hibiscus rosa-sinensis	.China rose.	Cure sinus, aphrodisiac, cystitis, venereal disease.
	Malvastrum coromandelium	False mallow.	Aphrodisiac, premature ejaculation, Anti-inflammatory.
	Sida rhombifolia	.Cuban jute.	Reduce swelling, emollient, rheumatism, and headache.
	Triumfetta rhomboidea	.Burr Bush.	Intestinal ulcers, diarrhea, pimples, snake bite.
	Urena lobata	Caesar weed.	Diarrhea, dysentery, hyperacidity.
Moraceae	Fiscus elastic	Rubber tree	Stomach problem, nausea, digestive problem, and trichuriasis.
Muntingiaceae	Muntingia calabura	Jamaica cherry	Cold, headache, antiseptic properties.
Myrtaceae	Eucalyptus gunnii	Cider gum	Antiseptic, coughs, colds, throat infection.
	Psidium guajava	Guava	Dysentery, gonorrhea, skin problem.
Nelumbonaceae	Nelumbo nucifera	Lotus.	Astringent, diarrhea, cholera, tonic.
Oleaceae	Jasminum multiflorum	Downy jasmine.	Headache, wounds, snake poisoning,



	Jasminum nudiflorum	Common jasmine.	Cancer, liver disease, dysentery, wound healing.
	Jasminum sambac	Arabian Jasmine.	Anti-depressant, cancer, ulcer, eye disorder.
Onagraceae	Epilobium hirsutum	Hairy willow-herb.	Prostate disease, cancer, sleeping disorder.
	Epilobium montanum	Willow herb.	Kidney problem,
	Oenothera biennis	Evening star.	Breast pain, eczema.
Oxalidaceae	Oxalis corniculata	Creeping Wood Sorrel.	Open sores, akin disease, lithnotripic.
	Oxalis dillenii	Southern Wood Sorrel.	Antiscorbic, influenza, fever, Snake bites.
Phyllanthaceae	Breynia vitis-idaea.	Coral berry tree.	Hemorrhage, tonsils, rheumatism, stop bleeding.
	Phyllanthus reticulatus	Black-Honey Shrub	Heart disorder, sore throat, ant diabetic.
Piperaceae	Piper betle	Betel Vine.	Sex stimulant, stop bleeding, and constipation.
Poaceae	Chloris barbata	Swollen Finger Grass.	Skin disease, fever, diarrhea, diabetes.
-	Dactylis glomerate	Orchard grass.	Treating tumor, kidney, and bladder ailments.
	Eleusine coracana	Finger Millet.	Fever, hepatitis, liver disease, pneumonia.
	Orizya sativa	Rice.	Appetite, control sweating, chronic pneumonia.
	Panicum repens	Torpedo grass.	Treating menstrual cycle.
	Phleum pretense	Timothy grass.	Allergies, fever, tumour disease, asthma.
	Saccharum officinarium	Sugarcane.	Acidity, wounds, sore eyes, whooping cough.
Polygonaceae	Persicaria lanthifolia	Pale smartweed.	Antiseptic, Astringent, stomach complaints, fever.
Portulaceae	Portulaca oleracea	Purslane.	Stomachache, coughs, sores, skin disease.
Rosaceae	Rosa chinensis	China rose.	Blood circulation, arthritis, coughs, and dysmenorrhea.
Rubiaceae	Ixcora coccinea	Jungle geranium.	Diarrhea, fever, dysentery, anti-inflammatory.
	Metacarpus hiatus	Tropical Girdle pod.	Venereal disease, skin disease, leprosy, ring worm.
	Richard sabra	Rough Mexican Clover.	Gastric, fevers, amoebic dysentery.
	Rubbia peregrine	Wild Madder.	Abortification, diuretic, emmeagogue, aphrodisiac



Rutaceae	Aegle marmelos	Beli fruit.	Abdominal pain, heat in abdomen, vomiting.
	Murraya koenigii	Curry Leaf.	Anti-emetic, eye, blood sugar, urinary problem.
Sapindaceae	Cardiospermum halicacabum	Balloon Vine.	Rheumatism, nervous disease, snake bite.
Solanaceae	Capsicum annum	Chilly.	Tympanitis, paralysis, rheumatoid arthritis.
	Datura metel	Kala Dhatura.	Asthma, blister, boils, rheumatism, ring worm.
	Physalis minima	Gosse berry.	Anticancer activity, dropsy, urinary tract disorder, gout and gonorrhea
	Solanum americanum	Black nightshade.	Gonorrhea, urinary problem, heart pain.
	Solanum lycopersicum	Tomato.	Worm swelling, leprosy, skin problem.
	Solanum sisymbriifolium	Sticky Nightshade bitter.	Toothache, cough, wounds, stomachache.
	Solanum tuberosum	Irish potato.	Eye disease, inflammation, peptic ulcers, antispasmodic.
Verbinaceae	Stachytarpheta jamaicensis	Blue porter weed.	Nervous disorder, diabetes, skin disorder.
	Verbena officinalis.	Vervain.	Nervous disorder, urinary disorder, chest pain.
Violaceae	Viola rostrata	Common blue violet.	Headache, constipation, coughs, sore throats.
Zygophyllaceae	Tribulus terrestris	Puncture Vine.	Urinary infection, kidney stone disorder.





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