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FLORAL DIVERSITY IN KONNI ECO-TOURISM, PATHANAMTHITTA, KERALA, INDIA

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Abstract
The present work deals with the floral studies of Konni Eco -Tourism, Pathanamthitta, Kerala, India. This study was conducted for a period of 3 months from January 2025 to March 2025. During this study a total of 39 plants belonging to 29 families including herbs, shrubs and trees were studied. All the plants in this study were recorded by visting the area. Plants were utilized as food, fodder and medicines. The study may provide valuable information for the sustainable management of this fragile ecosystem. This study could play an important role for the conservation of valuable phyto- diversity, use of this phyto-diversity for the welfare of all other organisms, better ecological balance in future and sustainable development of the area.

Keywords: Ecological, Services, Resources, Resilience, Systems

Introduction

Plant diversity, also known as biodiversity or Phytodiversity, refers to the variety of plant species in a given area. It encompasses the differences in floristic composition, genetic variations, and the ecosystems where plant species are found. Plant diversity is vital for maintaining healthy ecosystems by regulating natural processes and growth cycles. Plants provide numerous ecological services, such as shade, wildlife habitat, clean water, healthy soil, and clean air. Plant diversity is essential for human survival and well-being, providing food, fuel, fibre, and medicine. Plant biodiversity ensures a resource pool for new food crops and medicine Plant biodiversity helps balance ecosystems, protect watersheds, mitigate erosion, moderate climate, and provide shelter for animals. Floristic diversity allows different regions to analyse the environment and the evolution of the area (Kramer *et al.*,2007).

The term "flora" is often used to describe the collective plant life of a particular place, like a forest, a garden, or even a continent. It supports a diverse range of pollinators, provides essential resources like food and medicine, and contributes to the overall stability and resilience of natural systems. Floral diversity provides us much essential welfare like food, fibre. Loss of variety of plants has direct and indirect result as negative impact on organisms. is crucial for maintaining ecological balance and supporting life on Earth. The present work on the documentation of flora in Konni Eco-Tourism centre in Pathanamthitta district was undertaken on this concept. It is one of the beautiful eco-tourism centres with plenty of Ashoka trees. Konni is famous for its historic elephant training centre, where elephants were traditionally trained for forest work. It's now a popular tourist attraction offering close encounters with elephants surrounded by dense forests and hills, Konni is a great spot for nature lovers. Trekking, forest walks, and wildlife spotting are popular activities. Konni serves as an entry point to the beautiful forests of the Western Ghats, making it an ideal base for exploring nearby forest reserves and sanctuaries. The region has cultural and spiritual importance, with ancient temples and folk traditions tied to the forest and wildlife.

Materials and methods

The present floral study was conducted in Konni ecotourism, Konni in Pathanamthitta district for a period of 3 months from January 2025 to April 2025. Field trip was conducted to Konni ecotourism for the collection of plants. Herbarium specimens and raw materials were

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collected from the study area and the photographs of the plants were taken. Identification of plants was done by using google lens and it is confirmed with the help of various floras including flora of Thiruvananthapuram, flora of Pathanamthitta *etc.*

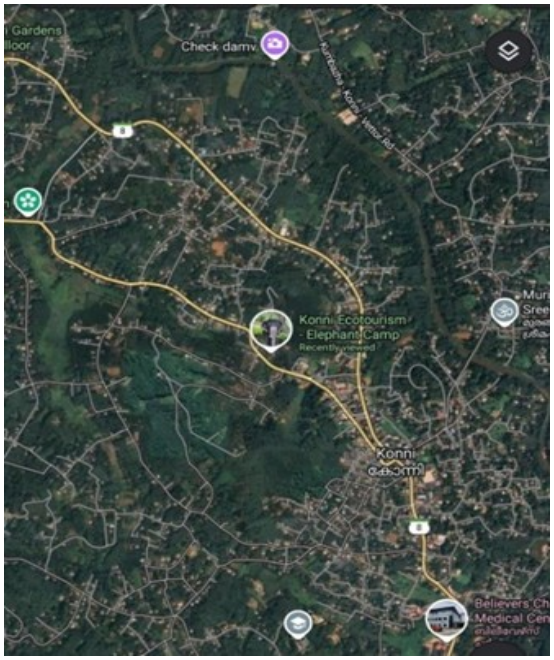

Figure 1. Map showing Konni ecotourism

Result and Discussion

A total of 39 species were recorded from the area, which include trees, herbs and shrubs. The floristic survey conducted in the selected ecotourism area revealed a diverse representation of plant families, among which Fabaceae was one of the most prominent and frequently encountered families. Members of Fabaceae were recorded across different habitat types within the area, including forest edges, open grasslands, trailsides, and disturbed sites near tourist activity zones.

A total of multiple Fabaceae species were collected and identified, representing various growth forms such as trees, shrubs, climbers, and herbs.

Fabaceae species were found to be well distributed throughout the study site followed by species in Rubiaceae, Acanthaceae, Euphorbiaceae, Moraceae, Apocynaceae, Phyllanthaceae *etc.* The details are given in Table 1.

Table 1. Details of plant species collected from the study area

Sl. Number	Local name	Scientific name	Family	Uses
1	Vella kurunji	*Chassilia ophioxyloides*	Rubiaceae	Used to treat rheumatism, pneumonia, and head disorders
2	Blood berry	*Rivina humilis*	Phytolaccaceae	Cultivated as an ornamental plant in the regions. Extracts from different parts of the plant (roots, stems, leaves, inflorescences, and fruits) have shown antibacterial and antioxidant activity.
3	Balloon vine	*Cardiospermum helicacaum*	Sapindaceae	Used to treat nervous disorder and as memory booster. Leaves are used to treat rheumatism, stiffness of limbs, and joint pain.
4	Kallurukki	*Scoparia dulcis*	Plantaginaceae	Used for treating various ailments including diabetes, hypertension, and kidney stones.

Sl. Number	Local name	Scientific name	Family	Uses
5	Caesar wood	*Urena lobata*	Malvaceae	Root bark is used to treat vernereal diseases. Root powder is mixed with milk is used to treat bronchitis and asthma.
6	*Momordica*	*Momordica*	Cucurbitaceae	Fruit and leaves are used in traditional medicine for various purposes. Used in cooking as vegetable in some cultures.
7	Vatta	*Macaranga peltata*	Euphorbiaceae	Various parts have been used to treat ailments. The tree is a pioneer species, helping to restore degraded forests
8	Coffe	*Coffea arabica*	Rubiaceae	Coffee beans are harvested for their flavor, aroma, and caffeine content. Used to make a popular beverage (coffee).
9	Mango	*Mangifera indica*	Anacardiaceae	Used in traditional medicine for various purposes, including antioxidant and anti-inflammatory properties. Leaves and bark have been used in traditional remedies for various ailments.
10	Teak	*Tectona grandis*	Lamiaceae	Furniture making, construction, and various parts have been used to treat ailments like inflammation and skin conditions.
11	Gin berry	*Glycosmis pentaphylla*	Rutaceae	It is also used for jaundice and liver-related ailments. The whole plant is used in traditional medicine to treat cough, fever, and anemia.
12	Blush Clock	*Thunbergia erecta*	Acanthaceae	Commonly used for its vibrant blue flowers and low-maintenance nature in gardens and containers. In some traditions, it is used as a medicine for children against worms.
13	Amla	*Phyllanthus emblica*	Phyllanthaceae	Boosts immunity Improves digestion Supports skin and hair health Helps manage blood sugar and cholesterol levels Cosmetics: Found in hair oils and shampoos due to its strengthening properties
14	Cape Jasmine	*Gardenia jasminoide*	Rubiaceae	Commonly used in gardens, landscapes, hedges, and as potted plants. Popular in floral arrangements due to its striking appearance and scent. Essential oil is often used in aromatherapy for relaxation and stress relief.
15	Mahagony	*Swietienia mahagony*	Meliaceae	The sour, tangy pulp is a popular ingredient in curries, chutneys, sauce.
16	Thorny bamboo	*Bambusa arundinaceae*	Poaceae	Extract of *B. arundinacea* have shown anti -inflammatory and anti-ulcer activity in studies and often used for bone health, joint pain, and general debility.

Sl. Number	Local name	Scientific name	Family	Uses
17	Wild jack	*Artocarpus hirsutus*	Moraceae	Used in the house and boat building, furniture, *etc.* The wood is moderately hard, durable; it lasts well in water and is not attacked by white ants.
18	Black plum	*Syzigium cumini*	Myrtaceae	It is a well reputed medicinal plant with the anti-inflammatory potential. The plant is used as antioxidant
19	Spectacular cassia	*Senna spectabilis*	Fabaceae	In traditional medicine for treating constipation, skin diseases, infections, diabetes, malaria, and inflammation.
20	Bengal clock wine	*Thunbergia grandiflora*	Acanthaceae	Used for its ornamental qualities and for its medicinal properties. Some parts of the plant, like spring greens and roots, are edible.
21	Fig	Ficus benjamina	Moraceae	Widely used for its ornamental value, both indoors and outdoor. *Ficus benjamina* is a known air purifier, removing pollutants from indoor air. Effectively removes formaldehyde, benzene, and trichloroethylene, common indoor air contaminants.
22	Tamarind tree	*Tamarindus indicus*	Fabaceae	Used to treat colds, fever, and intestinal worms, and as a wound healing agent. The pulp, leaves, bark, and seeds have been used traditionally to treat conditions like diarrhea, constipation, fevers, malaria, and respiratory problems. Tamarind pulp can be sweetened and used in candies and other sweet treats.
23	Wild castor	*Baliospermum montanum*	Euphorbiaceae	Used in treating constipation, jaundice, and as an anthelmintic. The roots and seeds are known for their strong purgative properties. Decoctions of the leaves are used to treat asthma.
24	Shank pushpam	*Clitoria ternatea*	Fabaceae	Widely planted for ornamental purposes, especially in tropical and subtropical gardens, where it is used to cover fences, trellises, and walls. The flowers are used to make a blue herbal tea, which has an earthy, slightly floral flavor. In traditional medicine, particularly in Ayurveda and Southeast Asian practices, *Clitoria ternatea* is used as a memory booster and cognitive enhancer.

Sl. Number	Local name	Scientific name	Family	Uses
25	Thonni thangi	*Draceana sp*	Asperagaceae	Used for their ornamental value as houseplants as land-scape plants in some areas.
26	Crape jasmine	*Tabernaemontana divericata*	Apocynaceae	Leaves and flowers are some-times used in herbal remedies for inflammation and to relieve pain. The plant is also used to treat headaches, fevers, and coughs in some traditional healing practices. The bark and roots have been used in some cultures to treat digestive problems
27	Ixora	*Ixora coccinea*	Rubiaceae	Ixora plants, particularly *Ixora coccinea*, have a variety of traditional medicinal uses, including treating dysentery, leucorrhoea, and dysmenorrhea.
28	Pambukolli	*Rauwolfia tetraphylla*	Apocynaceae	Its roots, leaves, and fruits have been used to treat cardiovascular diseases, hypertension, and psychiatric disorders. It's also used in traditional medicine for snakebites, malaria, and skin ailments.
29	*Monkey pod*	*Samanea saman*	*Fabaceae*	The wood is used for furniture, carving, and boat building. Used as a shade tree in parks, urban landscapes, and for crops like coffee, cacao, and vanilla.
30	Indian plum	*Ziziphus oenlopia*	Rhamnaeae	Used for treating stomach aches, ulcers, and digestive problems. Roots and bark are used in Ayurvedic medicine for antidiabetic treatments. Used for healing wounds, and for skin infections. Used for fever, bronchitis, liver complaints, and anemia, among other conditions.
31	Elephant fern	*Angipteris evecta*	Marattiaceae	The starchy rhizomes are eaten after processing to remove toxins. The rhizomes are used by some tribes to treat snake bites and insect stings. The rhizomes are sometimes used to perfume coconut oil.

Sl. Number	Local name	Scientific name	Family	Uses
32	Cathedral bells	*Kalanchoe pinnata*	Crassulaceae	*Kalanchoe species* have a variety of traditional medicinal uses, including treating wounds, boils, bruises, inflammatory conditions, and infections.
33	Paruval	*Pothos scandens*	Araceae	The plant is used to treat asthma, convulsions, epilepsy, smallpox, wounds, and bone fractures. It's also used for reducing swelling, treating burns, and as a fodder for livestock.
34	Checkered vanda	*Vanda tesellata*	Orchidaceae	The roots are alexiteric and antipyretic; useful in dyspepsia, bronchitis, inflammations, piles and hiccup.
35	Glossy cassia	*Senna nitida*	Fabaceae	Can be used in a wide range of landscape settings, making it a popular choice for both residential and commercial projects.
36	Indian almond	*Terminalia catappa*	Combrec-taceae	Its leaves, bark, and fruit are used to treat conditions like dysentery, hepatitis, and intestinal ailments. The seeds are edible and can be consumed raw or cooked.
37	Poor man's cycad	*Encephalartos villosus*	Zamiaceae	It is used for ornamental purposes in landscaping and gardening.
38	Ankolam	*Allangium chinense*	Cornaceae	The roots, flowers, and leaves of *Alangium chinense* have been used to treat rheumatic arthritis, a common ailment in many cultures. The roots and stems are believed to be effective in treating numbness and traumatic injuries.
39	Ashokam	*Saraca indca*	Fabaceae	It's used to treat various uterine disorders, including dysfunctional uterine bleeding, leucorrhea, and other gynecological issues.

Summary and conclusion

Floral diversity of any place is one of the most important blessings of nature. If we have a detailed knowledge about plants, we can use them in a number of ways for welfare of mankind as well as other organisms. An attempt was made to study the floral diversity available in Konni ecotourism 2025. The rapid loss in floristic diversity and changing pattern of vegetation due to various biotic and abiotic factors has necessitated the qualitative and quantitative assessment of vegetation. The study helps to identity the plant wealth and its potential values. Assessment of vegetation composition, understand species richness and diversity patterns is fundamental for conservation of this natural area. The listing of species is easy and comparitively less time consuming (Saima *et al.*,2009) and it provides important public outreach and fundamental informations to use in addressing the biodiversity crisis. In recent times,part of medicinal plant in traditional health care has

diverted the attention of researchers towards ethno medicines (Jadán, 2021) florestic catalogues are the source of botanical details for a particular field and it serve as a useful.

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