

Ethnobotanical Survey and Traditional Uses of Different Plant Species in Willingdon College Campus, Sangli (Maharashtra), India

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Abstract: Medicinal plants is an essential component in Indian system. The present ethnobotanical survey documents the plant diversity and their medicinal uses within the campus of Willingdon College, Sangli. Floristic surveys were conducted from June 2025 to February 2026. College campus covers diverse plant species including herbs, shrubs, trees, weeds, ornamental plants etc, out of which some plant species are naturally growing while some are cultivated. Trees constituted 40%, shrubs 25%, herbs 30%, and climbers 5% of the total species. Many plant species found in campus possesses medicinal properties. Important medicinal plants observed in campus include Neem, Tulsi, Adulsa, Shatavari etc. The present study highlights the ecological and medicinal significance of campus flora and also highlights the conservation and educational value.

Keywords: Ethnobotany, Medicinal Flora, Campus Biodiversity, Sangli, Conservation Biology

I. INTRODUCTION

India is known as one of the world's mega-biodiversity centres. Plants play a very essential role in maintaining ecological balance. Since ancient time, peoples have been used plants for various purposes such as source of food, medicine, timber, fuel and other economic purposes etc. It is approved that many plant species are used for traditional health care, and also many plant species are used for drug synthesis. Traditional systems such as Ayurveda, Siddha mainly use plant derived medicines for cure various diseases.

Ethnobotany is the study of interaction between peoples and plants including, plants used for various applications such as food, fodder, fuel, medicines etc (Ram *et al.*, 2004). In India local peoples still use locally available wild and cultivated plant species to treat variety of diseases and disorder (Mahishi *et al.*, 2005). Willingdon College campus provides suitable habitat for diverse plant species including trees, shrubs, herbs, ornamentals, and weeds with medicinal importance. Present study was carried for documentation of medicinal plant in college campus and its traditional uses.

II. REVIEW OF LITERATURE:

About 500 millions peoples in south Asia are reported to use plants for healthcare purpose (Demissie A, 2001). According to World Health Organization, 80% local communities are dependent on the local medicinal plants for their preliminary health care (WHO, 2002). Long term usages of medicinal plants are safe because they are natural (Mukalia *et al.*, 2022). Different types of compounds are present in plant derived medicine (Karimi *et al.*, 2015) and most of plants possess antioxidant properties (Kazemipoor *et al.*, 2012). More than 100 plant species are recorded for their medicinal applications to cure many diseases such as fever, diabetes, digestive disorder etc. (Babar *et al.*, 2024). Even today, plants are not only important in healthcare but also represent the most promising source of safe medicines for the future." (Hamburger and Hostettmann, 1991).



III. MATERIALS AND METHODS

Study Area

The present study was carried out in the campus of Willingdon College, located in Sangli district of Maharashtra, India. Willingdon college is located in southwestern part of Maharashtra. The campus of college having favourable environmental condition for plant diversity and vegetation. The temperature ranges from 35-40⁰c and it contain tropical Monsoon climatic conditions. Predominantly black cotton soil which are rich in mineral are present in campus.

Ethnobotanical survey:-

The college campus having a large area consisting of different categories of plants like trees ,shrubs, herbs, medicinal plants, ornamental plants etc. These plants are arranged in different sections such as botanical gardens, lawns, ornamental gardens, roadside plantations etc. The region of Willingdon college campus experiences tropical climate with temperature range in between 18⁰C to 38⁰C while average annual rainfall range from 18⁰C to 38⁰C. Ethnobotanical survey was carried out throughout the year to collect information about plant species. For the identification documentation healthy plant specimens were selected ,in case of trees ,shrub, small plant parts were collected. Identifications of plant species was carried out through direct observations, with help of review literature, comparison with herbarium specimens and with help of Botany department faculty.

List of Medicinal Plants Recorded:

Botanical Name	Family	Local name	Plant part used	Medicinal use
Azadirachta indica A.Juss	Meliaceae	Neem	Leaves	Skin diseases
Mangifera indica L.	Anacardiaceae	Amba	Leaves	Diabetes
Psidium guajava L.	Myrtaceae	Peru	Leaves	Diarrhea
Ficus benghalensis L.	Moraceae	Vad	Latex	Wound healing
Delonix regia(Bojer ex Hook.)Raf.	Fabaceae	Gulmohar	Leaves	Anti-inflammatory
Ficus religiosa L.	Moraceae	Pimpal	Bark	Asthma
Moringa oleifera Lam.	Moringaceae	Shevga	Leaves	Nutritional
Pongamia pinnata (L.)Pierre	Fabaceae	Karanj	Oil	Skin diseases
Eucalyptus globulus Labill	Myrtaceae	Nilgiri	Oil	Cold
Syzygium cumini (L.) Skeels	Myrtaceae	Jamun	Seed	Diabetes
Polyalthia longifolia (Sonn.)Thwaites	Annonaceae	Ashok	Bark	Fever
Delonix regia (Bojer ex Hook.)Raf.	Fabaceae	Gulmohar	Leaves	Anti-inflammatory
Tamarindus indica L.	Fabaceae	Chinch	Pulp	Digestive
Portulaca oleracea L.	Portulacaceae	Ghol	Leaves	Anti-inflammatory
Saraca asoca (Roxb.)Willd.	Fabaceae	Ashoka	Bark	Gynaecological disorders
Duranta erecta L.	Verbenaceae	Duranta	Leaf	Skin diseases
Hibiscus rosa-sinensis L.	Malvaceae	Jaswand	Flower	Hair growth
Lawsonia inermis L.	Lythraceae	Mehendi	Leaf	Cooling agent
Aloe vera (L.)Burm.f.	Asphodelaceae	Koraphad	Leaf gel	Wound
Catharanthus roseus 9L.)G.Don	Apocynaceae	Sadaphuli	Leaves	Anticancer
Ricinus communis L.	Euphorbiaceae	Erand	Oil	Laxative



Duranta erecta L.	Verbenaceae	Duranta	Leaves	Antimicrobial
Curcuma longa L.	Zingiberaceae	Halad	Rhizomes	Anti-inflammatory
Cynodon dactylon (L.) Pers.	Poaceae	Durva	Whole	Wound
Tridax procumbens L.	Asteraceae	Gharma	Leaves	Wound
Portulaca oleracea L.	Portulacaceae	Ghol	Leaves	Anti-inflammatory
Clitoria ternatea L.	Fabaceae	Gokarna	Flower	Memory
Tinospora cordifolia (Willd.) Hook. f. and Thomson	Menispermaceae	Gulvel	Stem	Immunity
Santalum album L.	Santalaceae	Chandan	Wood	Antiseptic, Anti-inflammatory
Aegle marmelos (L.) Correa	Rutaceae	Bael	Leaves, fruit	Diarrhea, Diabetes
Justicia adhatoda L.	Acanthaceae	Adulsa	Leaves	Respiratory disorder
Calatropis procera (Aiton) Dryand	Asclepiadiaceae	Rue	Leaves	Wound healing
Tectona grandis L.f.	Lamiaceae	Teak	Root	Pile, Urinary discharge
Carica papaya L.	Caricaceae	Papaya	Fruit	Digestion problem
Sapindus trifolius L.	Sapindaceae	Ritha	Fruit	Anti-inflammatory
Nyctanthes arbour L.	Oleaceae	Parijatak	Leaves, Flower	Cough, Asthama
Asparagus racemosus Wild	Asparigaceae	Shatavari	Leaves	Hyper acidity, Dysentery
Jasmin sambac L. (Aiton)	Oleaceae	Mogra	Flower, leaves	Fever, Diarrhoea

IV. RESULT AND DISCUSSION

The present exploration was highlights that Willingdon college are rich in plant diversity. Campus survey showed that out of recorded plant species, trees are most dominant group having 39.6% diversity followed by herbs with (29%), shrubs with (12%) and climber with (6.2%) diversity. There are families of are recorded like Fabaceae, Liliaceae, Apocynaceae, Myrtaceae, Amaranthaceae, Euphorbiaceae etc. Many of these identified plants are traditionally used of many common diseases. Survey and documentation of such plant resources help to understand the importance of biodiversity and roles of plant in healthcare.

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REFERENCES

1. Babar, T. P., Jain, V. K., Mishra, T., & Patil, D. N. (2024). Ethnobotanical survey of medicinal plants in tribal regions of India. *Revista Electronica de Veterinaria*.
2. Demissie, A. (2001). Biodiversity conservation of medicinal plants: Problems and prospects. In *Proceedings of the National Workshop on Biodiversity and Sustainable Use of Medicinal Plants in Ethiopia* (Addis Ababa, Ethiopia). IBCR.
3. Jain, S. K. (1991). *Dictionary of Indian folk medicine and ethnobotany*. Deep Publications.



4. Jain, S. K., & Rao, R. R. (1977). *A handbook of field and herbarium methods*. Today & Tomorrow's Printers and Publishers.
5. Karimi, A., Majlesi, M., & Rafieian-Kopaei, M. (2015). Herbal versus synthetic drugs: Beliefs and facts. *Journal of Nephro pharmacology*, **4**, 27–30.
6. Kazemipoor, M., Wan Mohamed Radzi, C., Cordell, G. A., & Yaze, I. (2012). Safety, efficacy and metabolism of traditional medicinal plants in the management of obesity: A review. *International Journal of Chemical Engineering and Applications*, **3**, 288–292.
7. Mahishi, P., Srinivasa, B. H., & Shivanna, M. B. (2005). Medicinal plant wealth of local communities in some villages in Shimoga District of Karnataka, India. *Journal of Ethnopharmacology*, **98**, 307–312.
8. Mukaila, Y. O., Oladipo, T. O., Arogundade, O. O., & Ajao, A. A. N. (2022). Traditional knowledge of medicinal plants used in Ile-Ife, Southwestern Nigeria. *Asian Journal of Ethnobiology*, **5(2)**, 71–83.
9. Ram, J., Kumar, A., & Bhatt, J. (2004). Plant diversity in six forest types of Uttaranchal, Central Himalaya, India. *Current Science*, **86(7)**, 975–978.
10. World Health Organization. (2000). *WHO traditional medicine strategy 2002–2005*. World Health Organization.

