

MEDICINAL PLANT DIVERSITY IN LOCAL FLORA AND THEIR TRADITIONAL THERAPEUTIC APPLICATIONS IN COMMUNITY HEALTH CARE

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Abstract

This comprehensive review explores the diverse medicinal uses of local flora in traditional herbal medicine. The study documents 42 plants from the surrounding area, providing their botanical names, English names, and therapeutic applications. The medicinal plants were found to treat a wide range of ailments, including respiratory disorders, digestive issues, skin diseases, urinary problems, diabetes, cancer, and inflammatory conditions. Some plants also exhibited analgesic, antipyretic, and antimicrobial properties. The study emphasizes the importance of preserving traditional knowledge and the potential for further research into the pharmacological properties of these medicinal plants. The findings highlight the need for conservation and sustainable use of local flora, as they play a crucial role in the healthcare needs of the community. The documentation of these medicinal plants contributes to the growing body of knowledge on traditional herbal medicine and serves as a basis for future studies on their efficacy and safety. This review underscores the significance of local flora in traditional medicine and the importance of their preservation for the well-being of the community and the advancement of scientific research in the field of herbal medicine. The findings of this study can be used to promote the conservation and sustainable use of these medicinal plants in the local community.

Keywords: Herbal medicine, Local Flora, Traditional, Conservation

Introduction

Plants have been used for medicinal purposes long before prehistoric period. Traditional systems of medicine continue to be widely practised on many accounts. Population rise, inadequate supply of drugs, prohibitive cost of treatments, side effects of several synthetic drugs and development of resistance to currently used drugs for infectious diseases have led to increased emphasis on the use of plant materials as a source of medicines for a wide variety of human ailments. As per data available over three-quarters of the world population relies mainly on plants and plant extracts for their health care needs. More than 30% of the entire plant species, at one time or other were used for medicinal purposes. Thus, the economic importance of medicinal plants is much more to countries such as India than to rest of the world. Herbal medicines proved to be the major remedy in traditional system of medicine.

Treatment with medicinal plants is considered very safe as there is no or minimal side effects. These remedies are in sync with nature, which

is the biggest advantage. The golden fact is that, use of herbal treatments is independent of any age groups and the sexes. The ancient scholars only believed that herbs are only solutions to cure a number of health related problems and diseases. Herbal treatment is growing in popularity across the globe. These herbs that have medicinal quality provide rational means for the treatment of many internal diseases, which are otherwise considered difficult to cure. Medicinal plants cure several common ailments. These are considered as home remedies in many parts of the country.

The use of plants for treating diseases is as old as the human species. Popular observations on the use and efficacy of medicinal plants significantly contribute to the disclosure of their therapeutic properties, so that they are frequently prescribed, even if their chemical constituents are not always completely known. Medicinal plants contain a wide variety of secondary metabolites or compounds such as tannins terpenoids, alkaloids, flavonoids; that dictates the therapeutic potency of the plants most especially the antimicrobial activities.

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Medicinal plant contains chemical compounds that dictate their therapeutic potency. Researchers have shown that different plants contain different bioactive components at different concentrations. The higher the amount of the important phytochemical in medicinal plants, the greater therapeutic potency or medicinal importance of the plant.

Materials and Methods

For the present study, we have selected the site as our home and surroundings and made a list of plants found there. We collected the data separately and observed that some plants are common and found everywhere. Then we prepared a list of medicinal plants from our surroundings. After collecting the list of medicinal plants, we found out their Botanical name, English name, and it's uses with the aid of reference books. Photographs of the plants were also taken. Our study included a list of about 38 Plants used for their medicinal value. In this study the plants were arranged alphabetically. The plants were grouped under 22 families. Figures of the selected plant species are presented in this article (figures 1 to 4).

Results and Discussion

1. *Aerva lanata* (Cherula) (AMARANTHACEAE)
Mountain knot grass
Habit : Herb
Uses : Useful in diarrhoea, bleeding, piles *etc.* Used for urinary problems
2. *Adhatoda vasica* (Adalodakam) (ACANTHACEAE)
Malabar nut
Habit : Shrub
Uses : Used for treatment of cold , asthma , rheumatism, bronchitis. Sedative and source of vitamin C. Prescribed for bleeding due to piles, peptic ulcer *etc.*
3. *Aloe vera* (Kattarvazha) (LILIACEAE) Aloe
Habit : Herb
Uses : Prevent from fungus, influenza virus, measles, and high fever .Cure many skin diseases, (treatment of facial edema or swelling) stomach disorders, inflammation and pain and reduces acidity .Remove dandruff from the hair and used to heal the burn marks
4. *Achranthus aspera* (Kadaladi) (AMARANTHACEAE)
Habit : Herb
Uses : Useful in kidney problem, pneumonia, drop-sy & paralysis .Used for infections in ear, mouth ulcer, abdominal pain *etc.*

5. *Andrographis paniculata* (Kiryath, Nilavepp) (ACANTHACEAE) Chiretta plant
Habit : Shrub
Uses : Used to prepare decoction and as liver tonic in Ayurveda. Cure fever, dyspepsia , dysentery and bronchitis.
6. *Asparagus recemosus* (Shatavari) (LILIACEAE)
Wild asparagus
Habit : Climber
Uses : Used as stimulants of lactic glands. Juice is used for the preparation of pills. Paste of the root is applied on to the area of Viper bite. Used to cure burning sensation.
7. *Azadirachta indica* (Veppu/Neem) (MELIACEAE)
English: Margosa Tree
Habit: Tree
Uses: This is a versatile tree used for its medicinal, insecticidal, and cosmetic properties, with extracts from leaves, bark, seeds, and flowers used to treat skin issues (acne, wounds, infections), boost immunity, manage diabetes, repel insects, and improve oral/dental health, acting as an antiseptic, anti-inflammatory, and antimicrobial agent.
8. *Bacopa monnieri* (Brahmi) (PLANTAGINACEAE)
Water hyssop
Habit : Herb
Uses : Increases Memory and thinking skills
9. *Biophytum sensitivum* (Mukutti) (UMBELLIFERAE)
Biophytum
Habit : Herb
Uses : Antiseptic, antipyretic and diuretic properties. Ability to clean the uterus and have ability to control sugar level in blood.
10. *Boerhavia diffusa* (Thazhuthamma) (NYCTANGINACEAE) Hog weed, pig wee
Habit : Herb
Uses :-Diuretic, used in treatment of asthma, blood pressure. Blood purifier , cures anaemia, Anti inflammatory, regenerate damage liver cells.
11. *Cardiospermum halicacabum* (Valliuzhinja) (SAPINDACEAE) Balloon wine
Habit : Herb
Uses: Relives stomach ache , bone fracture. Cure diseases in uterus ,ear ache, reduce obesity and analgesic. Helps in hair growth.
12. *Centella asiatica* (Kudangal) (UMBELLIFERAE)
Indian pennywort
Habit : Herb
Uses : Circulatory stimulant and stimulates hair growth. Brain stimulant, stimulate appetite, diuretic, anti-hepatic. Treat bowel complaints in children, sores, ulcers and skin problems . Helps in Proper functioning of cardiac muscles .
13. *Clitoria ternata* (Shamkupushpam) (FABACEAE)
White clitoria, Cordofan pea

Habit : Creeper

Uses :-Root extracts used for cough. Roots are useful to improve memory and intellectual power, increase sleep. The white flower extract is used to cure goiter. It is antipyretic and used for mental rejuvenation and stimulation. The root is antidote to poisonous insect bites. Used in treating ulcer, dysentery, lymph node enlargement & syphilis.

14. *Cissus quadrangularis* (Changalam paranda) (VITACEAE) Bone setter, Adamant creeper

Habit : Herb

Uses : Prevent the destruction of bones. Considered as analgesic, anti bacterial, antifungal and antioxidant.

15. *Coleus aromaticus* (Panikoorka) (LAMIACEAE) Indian borage

Habit : Herb

Uses :-Cure cold, fever sore throat, Nasal and chest congestion. Relieves itching, infection, insect bites and wounds congestion. Improves lactation.

16. *Curcuma longa* (Manjal) (ZINGIBERACEAE) Turmeric

Habit : Herb

Uses :-Anticancerous, anti-inflammatory & detoxifies the body. Used for blood purification and to cure digestive problems. Helps to treat scabs & fungal infections. Protects the liver and prostrate from toxicants.

17. *Cyperus rotundus* (Muthanga) (POACEAE) Nut Grass

Habit : Herb

Uses : Anti inflammatory, anti-pyretic, anti malarial, anti spasmodic. Good remedy for indigestion. Used in nausea, vomiting, diarrhoea, dysentery etc.

18. *Cynodon dactylon* (Karuka) (POACEAE) Bermuda grass

Habit: Herb

Uses: The rhizomes are diuretic in humans. The grass juice can act as an astringent. It has been observed that *Cynodon dactylon* may be selectively eaten by dogs to swiftly induce vomiting when they have gastrointestinal problems.

19. *Eupatorium ayapana* (Ayyappana) (ASTERACEAE) Ayapana

Habit : Shrub

Uses : Helps in stopping all external bleeding. Cures mouth sore, Cholera, haemorrhage, Antifungal.

20. *Emelia sonchifolia* (Muyalcheviyan) (ASTERACEAE) Tassel flower

Habit: Herb

Uses: It is an edible plant used in the Ayurvedic system of medicine for the treatment of tumours, inflammation, cough, rheumatism, and wounds.

21. *Elephantopus scaber* (Aanachuvadi) (ASTERACEAE) Elephanat's foot

Habit : Herb

Uses : Wound healing. Have anti inflammatory

activities. Used for fever and dysentery. They have anticancer properties. Roots are used for preventing vomiting, tooth decay etc. Leaves are used for ulcers. Roots and leaf are used for diarrhoea dysentery and stomach pain.

22. *Hemidesmus indicus* (Naruneendi, Nannari) (APOCYANACEAE) Indian sarsaparilla

Habit : Herb

Uses : Used in blood purification. Anti-inflammatory, diuretic, vulnerary. Prevents miscarriage, Improves fertility and treats syphilis.

23. *Hemigraphis colorata* (Murikooti, Muriyan pacha) (ACANTHACEAE) Red-flame ivy

Habit : Herb

Uses : Anti bacterial, anti - diabetic, anti - inflammatory. Paste of leaves applied to fresh wounds help to stop bleeding and promote healing.

24. *Hibiscus rosa-sinensis* (Chemparathy) (MALVACEAE) China rose, Chinese hibiscus

Habit : Shrub

Uses:-Used for arterial hypertension, diabetes, Menstrual disorders. Used to cure burning sensation during urination. Used for cough, fever, dandruff, and hair fall.

25. *Ixora coccinea* (Techi) (RUBIACEAE) Jungle geranium

Habit : Shrub

Uses :- Used as antiseptic. Used for skin diseases, colic diseases, flatulence, Used for diarrhoea, indigestion, ulcers, wounds etc.

26. *Kaempferia rotunda* (Kacholam)

(ZINGIBERACEAE) : Indian crocus, peacock ginger

Habit : Herb

Uses : Used to make ointments to treat scabies. Oil is used to treat itching. Tubers are used for blood clots and malignancy. Has potential anti-oxidant effects.

27. *Leucas aspera* (Thumba) (LAMIACEAE) Leucas

Habit : Annual Herb

Uses : Antipyretic, used for throat pain or tonsillitis, diabetics etc. Plant is also used for the treatment of snake venom. Leaves are also an excellent mosquito repellent. Leaf juice with honey is used for indigestion and stomach ache. The flowers with honey is effective for coughs and cold

28. *Mimosa pudica* (Thottavadi) (MIMOSACEAE) Humble plant

Habit : Herb

Uses : Leaf paste used in wounds. Used in piles, insect bites, diabetics, kidney pains, asthma, itching.

29. *Murraya koenigii* (Kariveppu) (RUTACEAE) Curry leaf tree

Habit : Tree

Uses : Eliminate the poisonous substances in the food. Cure the pain and swelling due to the bite of a viper.

30. *Ocimum sanctum* (Krishna Thulasi) (LAMIACEAE)
Holy Basil, Tulasi,
Habit : Small shrub
Uses : The pulp of the leaves helps to reduce swelling due to toxic bites. Used to treat common colds, headaches, stomach disorders, inflammation, heart disease, poisoning and malaria. contains high levels of eugenol and therefore is effective as a painkiller. The plant reduce blood glucose levels, diabetes and cholesterol.

31. *Phyllanthus niruri* (Keezharnelli) (EUPHORBIACEAE) Tone breaker
Habit : Herb
Uses : Used for the problems of stomach, genitourinary system. Prevent bleeding due to cobra bite. Effective in treating existing stones Anti diabetic, anti cancerous, antifungal. Used as Liver tonic. Used for the treatment of jaundice, intestinal disorders *etc.*

32. *Piper longum* (Thippali) (PIPERACEAE) Indian Long Pepper, Indonesian Long Pepper
Habit : Climber
Uses : Serves as a good digestive agent. Its oil and paste is applied on wounds and skin-related ailments. Long pepper helps in suppressing pain and reducing inflammation .

33. *Piper nigrum* (Kurumulak) (PIPERACEAE) Black pepper
Habit : Climber
Uses : Use as an anti-inflammatory, analgesic (painkiller), and antioxidant, stimulant, carminative, digestive, nerve tonic.

34. *Ricinus communis* (Avanakku) (EUPHORBIACEAE) Castor
Habit : Shrub
Uses : Used for the treatment of jaundice, chronic constipation & bleeding from gums. Used for the Contraceptive effect, irritation of eyes due to dust and swelling due to arthritis.

35. *Sida acuta* (Kurunthotty) (MALVACEAE) Country mallow.
Habit : Shrub
Uses :- Used in the treatment of respiratory system related troubles. Useful in blood ,throat, urinary system related troubles and .Anti-inflammatory.

36. *Solanum Xanthocarpum* (Kandakarichunda) (SOLANACEAE) Yellow nightshade
Habit : Shrub
Uses :- Anti-inflammatory, anti-cancerous and anti-fertility. Hepato-protective and hypoglycaemic. Mosquito larvicidal activity, antifilarial activity.

37. *Scoparia dulcis* (Kalluruki) (PLANTAGINACEAE) Goat weed.
Habit : Herb
Uses : Dried stem is boiled with water and this drink is used to daily consumption to prevent kidney stone. Leaf juice is directly applied to wounds. Whole part of the raw

plant grind and use for the treatment of inflammation, fever, wounds, ulcer, skin disease.

38. *Vitex negundo* (Karinochchi) (LAMIACEAE) Chinese chaste tree.
Habit : Shrub
Uses : Used for respiratory disorders like cough, cold, bronchitis *etc.* Used for pulmonary infections and allergic disorders like bronchial asthma.

39. *Vernonia cineria* (Puvamkurunthal) (ASTERACEAE) Purple Fleabane
Habit : Herb
Uses :- Used in decoction for diuretic, swelling, stomach pain, diarrhoea, eczema , inflammation and kidney disorders. Used in lower abdominal pain, menstrual pain. Juice extracted from the leaves is mixed with cow's milk and is used to treat conjunctivitis.

As our lifestyle is now getting techno-savvy, we are moving away from nature. While we cannot escape from nature because we are part of nature. As herbs are natural product they are free from side effects, they are comparatively safe, eco-friendly and locally available. Traditionally there are lot of herbs used for the ailments related to different seasons. There is a need to promote them to save the human lives. These herbal products are today are the symbol of safety in contrast to the synthetic drugs, that are regarded as unsafe to human being and environment. Although herbs had been priced for their medicinal, flavouring and aromatic qualities for centuries, the synthetic products of the modern age surpassed their importance, for a while. However, the blind dependence on synthetics is over and people are returning to the naturals with hope of safety and security. It's time to promote them globally.

According to WHO over 2100 plant species are useful in the preparation of medicines. Due to growing awareness about side effects and complications of chemical and synthetic medicines, cosmetics and health supplements, usage of herbal products has gained importance both in the Eastern and Western world. (Vaidyathnam and Variers 2005). The resources available for work with auspicious medicinal herbs are often limited. Availability of reliable raw material for the ayurvedic preparation are becoming scarce due to the unscientific over exploitation and dwindling forestland. A way to overcome the problem is to promote the cultivation of medicinal plants.

The co-operative activities of professional and amateur botanist are increasingly working together to save their indigenous forest. Further more the general public is becoming more and more involved in actively campaigning for conservation issues. It is thus imperative that consider conservation of not only economically importance crop plants but also their valid relatives and endangered species has to be considered. (Anonymous, 1988, 2000; Jain, 1991; Vaidyaratnam, 2005).

Though there several publications currently available on Indian medicinal plants most of the incorporate information on their general botanical description, medicinal uses and vernacular names. Botanists should encourage to introduce those plants from the wild and save them from careless destruction leading to extinction (Ahmad and Husain 2008; Sachan *et al.*, 2016; Rastogi *et al.*, 2020).

Plant taxonomy is useful tool to provide unambiguous universally accepted identification of plants that are in use and this is vital at present when ayurveda is finding increasing international acceptance.



Figure 1. *Aadhatoda vasica*



Figure 2. *Coleus aromaticus*

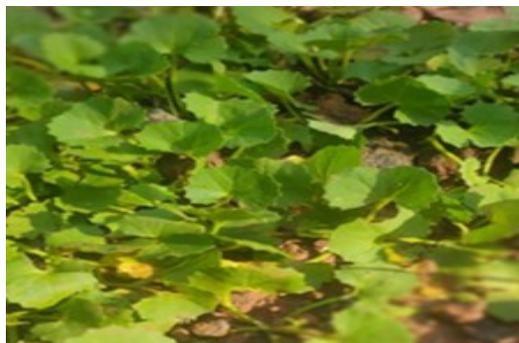


Figure 3. *Centella asiatica*



Figure 4. *Curcuma longa*

In India alone more than 15,000 species of higher plants are used in ayurvedic medicinal preparations. Large medicinal plant gardens are being maintained by prominent Ayurvedic drug manufacturing companies like Kottackal Arya Vaidya Sala, Nagarjuna and Oushadi *etc.* A study on the ethical and social values of these plants will help people to become aware of our traditions and customs and the role of medicinal plants in Kerala customs and traditions.

Summary and Conclusion

This study depicts a list of about 39 plants those are used for their medicinal value. From this study, it becomes clear that our surroundings contain several valuable plant resources which we could not know and properly. A large number of plants are found around us which are used for the treatment of various ailments. Some plants are rare and some are very common. Some weeds and wild plants are also useful to mankind. The study may useful for those interested in the utilization and study of herbs. An awareness among students and local communities has to be created for the multiplication of medicinal plant species by

ex situ conservation. The conservation of plants can promise a good environment in future. The information provided in this study is limited and further survey in this study will definitely reveal a quite good information for nature lovers also. It can be concluded that our surroundings is equipped with a large number of plant resources which are very useful to humans. Being the students, it is our duty to conserve the resources and nourish them.

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