

RANIGANJ GIRLS' COLLEGE

COURSE NAME: ENVIRONMENTAL STUDIES

COURSE CODE: AEE101

TOPIC OF THE PROJECT: MEDICINAL PLANTS AND THEIR USES IN INDIA

A PROJECT REPORT SUBMITTED BY SEMESTER-I STUDENTS

(ACADEMIC YEAR 2020-21)

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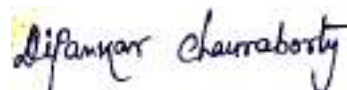
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This is to certify that this project titled “Medicinal Plants and their uses in India” submitted by the students for the award of degree of B.A./B.Sc. Honours/Program is a bonafide record of work carried out under my guidance and supervision.

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Plant's name- Thankuni
(*Centella asiatica*)

Urmi Dey

Department- Zoology

Paper- AECC-Core-1

Semester-1

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Kazi Nazrul
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Kanigani Girls' College
Department Of Zoology

B.Sc. Honours 1st Semester
Session: 2020-21

Topic: Medicinal Plants Of India

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I would like to express my special thanks of gratitude to our respectful teacher Mr. Dipankar Chakraborty — Department of Geography, Raniganj Girls' College for his sincere support and co-operation in the preparation of this project of B.Sc. honours in Zoology, Semester-1, Environmental studies (AECC-Cone-1).

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Introduction

Plants that possess therapeutic properties or exert beneficial pharmacological effects on the human body are generally designated as medicinal plants. The medicinal plants have been used for treatment for illnesses and diseases since the dawn of time.

The earliest historical records of medicinal plants are found from the Sumerian civilisation, where hundreds of medicinal plants are listed on clay tablets.

The compounds found in plants are of many kinds, like alkaloids, glycosides, polyphenols, etc.

Ethnobotany is the study of a region's plants and their practical uses through the traditional knowledge of a local culture and people.

Richard Evans Schultes is referred to as the "father of ethnobotany" although the idea of ethnobotany was first proposed by the early 20th century botanist John William Harshberger.

Medicinal Plants Of India:

1. Tulsi:

Binomial name: Ocimum tenuiflorum

English name: Holy Basil

Kingdom: Plantae

Order: Lamiales

Family: Lamiaceae

Genus: Ocimum

Species: O. tenuiflorum



Source: <https://images.app.goo.gl/88pZev6tDvoZueTkU9>

Tulsi is an annual delicate herb cultivated extensively in tropical climate of the country. Tulsi is kept sacred in Hindu philosophy.

Uses:

Tulsi has been used in Ayurveda practices since a long time for its treatment of diseases. Some uses of this plant are as follows:

- i. Promotes healthy heart
- ii. Treatment of kidney stone
- iii. Natural headache reliever
- iv. It helps to cure bacteria and infections.
- v. Cures indigestion and respiratory diseases.

2. Vasaka:

Binomial name: Justicia adhatoda

English name: Malabar nut

Kingdom: Plantae

Order: Lamiales

Family: Acanthaceae



Source: <https://images.app.goo.gl/VYgRXkPDRA3N4YXJ8>

Genus: Justicia

Species: J. adhatoda

Varaka is a shrub with spear-shaped leaves and is 10-15 cm in length. The leaves are bitter-tasting. The trunk has many long opposite ascending branches, where the bark is yellowish in colour. Flowers are usually white and fruits are with club-shaped capsules.

Uses:

Varaka is reported to be antimicrobial and anticancer. The other benefits of Varaka are as follows:

- i. Helps in curing cough and asthma
- ii. Cures skin diseases and leprosy
- iii. Cures chronic fever.

3. Brahmi:

Binomial name: Bacopa monnieri

English name: Thyme leafed gratiola

Kingdom: Plantae

Order: Lamiales

Family: Plantaginaceae

Genus: Bacopa

Species: B. monnieri



Source: <https://images.app.goo.gl/bTcquBerXSibeZLWA>

Brahmi is a perennial, creeping herb native to the wetlands of southern and eastern India. It is also known by the common names water hyssop, herb of grace and Indian pennywort.

Uses:

Brahmi is used as a general tonic to fight stress. The other uses of Brahmi are as follows:

- i. It helps in improving memory
- ii. It is used in Alzheimer's disease

iii. It is used for treating anxiety and ADHD (Attention deficit-hyperactivity disorder).

4. Thankuni:

Binomial name: Centella asiatica

English name: Asiatic pennywort

Kingdom: Plantae

Order: Apiales

Family: Apiaceae

Genus: Centella

Species: C. asiatica



Source: <https://images.app.goo.gl/LEQ3SEZmMujqLZ8g#7>

Thankuni is a herbaceous, perennial creeper and the whole plant is used for medicinal purpose. It grows along the low wet areas. It grows and spreads very well during the summer.

Uses:

Some common uses of thankuni are as follows:

- i. The leaf juice is used as a good health tonic
- ii. It gives relief from hypertension.
- iii. It cures gastrointestinal disease.

5. Kalmegh:

Binomial name: Andrographis paniculata

English name: Kalmegh

Kingdom: Plantae

Order: Lamiales

Family: Acanthaceae

Genus: Andrographis

Species: A. paniculata



Source: <https://images.app.goo.gl/FY7c1dQny2Us39fw6>

Kalmegh is commonly known as creat or green chiretta, is an annual herbaceous plant native to India. Other common names of the plant include "King of Bitter".

Uses:

Kalmegh, which is also known as the "King of Bitter" is used for various medicinal purposes as follows:

- i. It is mainly used for liver problems due to its antioxidant and anti-inflammatory activity.
- ii. It is also used for curing indigestion and diarrhea.

6. Babool:

Binomial name: Vachellia nilotica

English name: Indian gum

Kingdom: Plantae

Order: Fabales

Family: Fabaceae

Genus: Vachellia

Species: V. nilotica

Babool is commonly known as gum arabic tree, thorn mimosa, Egyptian acacia or thorny acacia is a flowering plant tree native to the Indian subcontinent. The tree is 5-20 m high with a dense sphere crown. The flowers are bright golden-yellow colour located at the end of the branches.

Uses:

Babool is majorly used for cleaning the teeth and the regular use of this helps in strengthening gums, teeth and also reduces pain and inflammation.

It is also used in healing wounds.



Source: https://en.m.wikipedia.org/wiki/Vachellia_nilotica

7. Vridhadaru:

Binomial name: Argyreia nervosa

English name: Elephant creeper

Kingdom: Plantae

Order: Solanales

Family: Convolvulaceae

Genus: Argyreia

Species: A. nervosa

Vridhadaru is a perennial climbing vine native to the Indian subcontinent. Though it can be invasive, it is used in Ayurvedic medicine for its medicinal value.

Uses:

Roots of this plant are known to be good brain tonic. The leaves are used by some people for healing wounds and treatment of skin conditions like eczema, itching and ringworm.

8. Shalparni:

Binomial name: Desmodium gangeticum

English name: Shal leafed bush

Kingdom: Plantae

Order: Fabales

Family: Fabaceae

Genus: Desmodium

Species: D. gangeticum

Salparni is a small 2-4 feet tall shrub which can be found throughout most parts of India and Himalayas.

Uses:

The herb is very useful in relieving nausea. The other uses are as follows:

- i. Cures chronic respiratory disorders
- ii. Relieves burning sensation, bloating and gastritis
- iii. Reduces dysentery and diarrhoea.



Source: [https://en.m.wikipedia.org/wiki/File:Elephant-creeper-\(Argyreia-nervosa\)-20100808.jpg](https://en.m.wikipedia.org/wiki/File:Elephant-creeper-(Argyreia-nervosa)-20100808.jpg)



Source: <https://images-app-goo.gl/EJPTm4R07bC7oZqUA>

Conclusion

Medicinal plants are considered as a rich resources of ingredients which can be used in drug development either pharmacopoeial, non-pharmacopoeial or synthetic drugs. Apart from that these plants play a critical role in the development of human cultures around the whole world.

So, steps must be taken for the conservation of these medicinal plants. Conservation of medicinal plants can be accomplished by the ex-situ or in-situ cultivation.

Bibliography

- Motaleb, Mohammad Abdul, 2011, Selected Medicinal Plants of Chittagong Hill Tracts, IUCN (International Union for Conservation of Nature)
- <https://en.m.wikipedia.org/wiki/Medicinal-plants> (Webliography)

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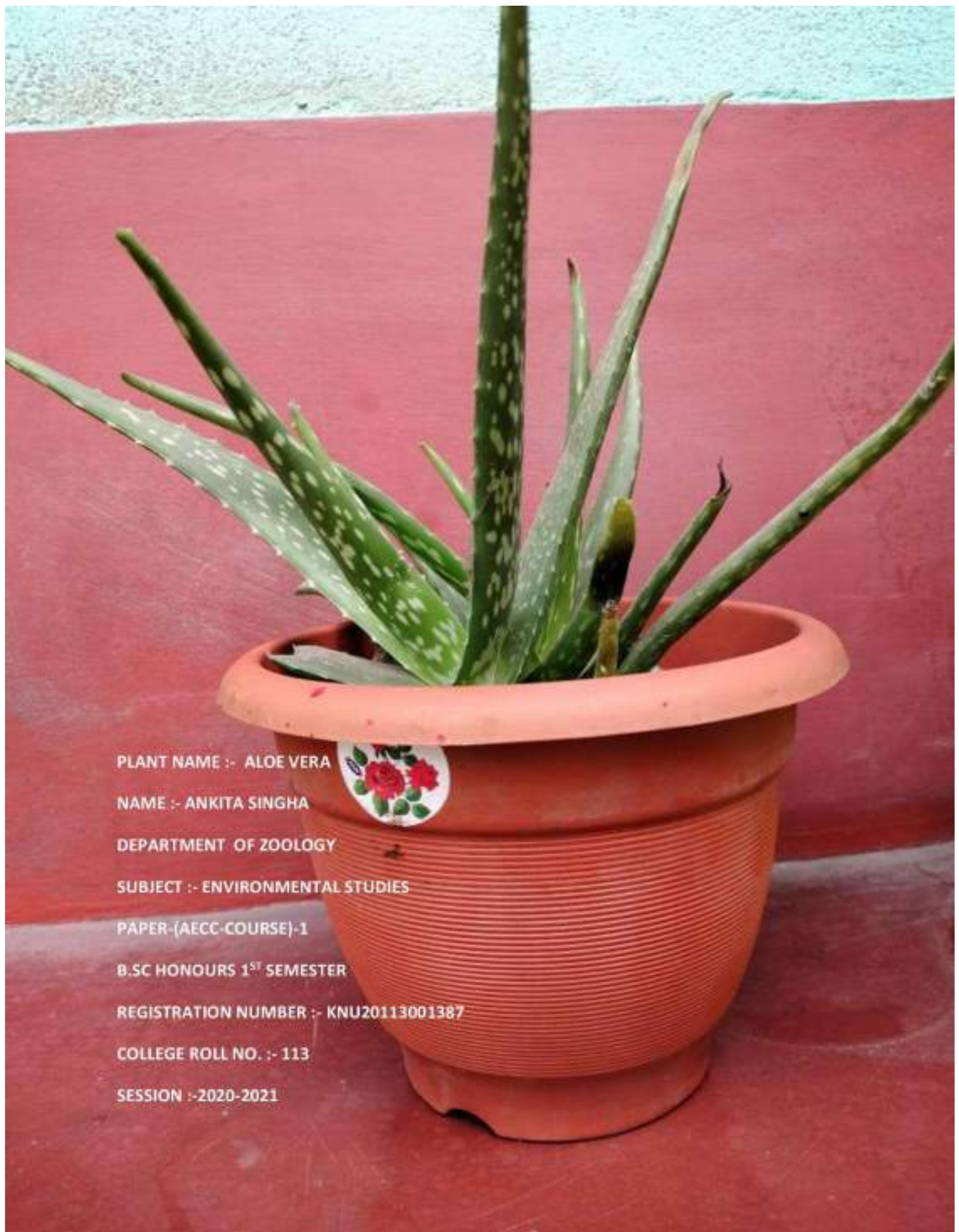
plant's Name - "ALOE VERA"





PLANT'S NAME - Aloe vera
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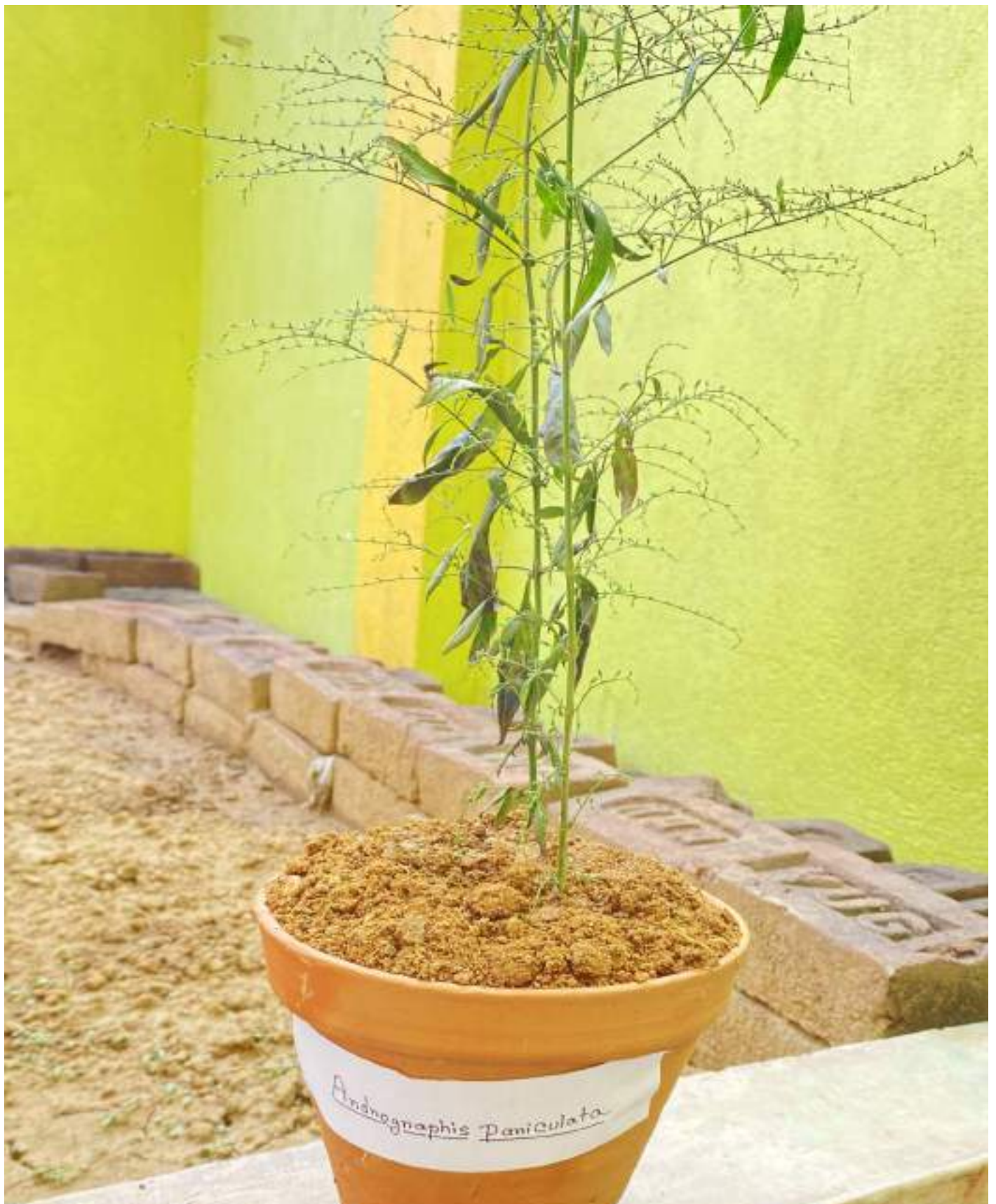
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PLANT'S NAME -
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plant- kalmegh(Andrographis paniculata)

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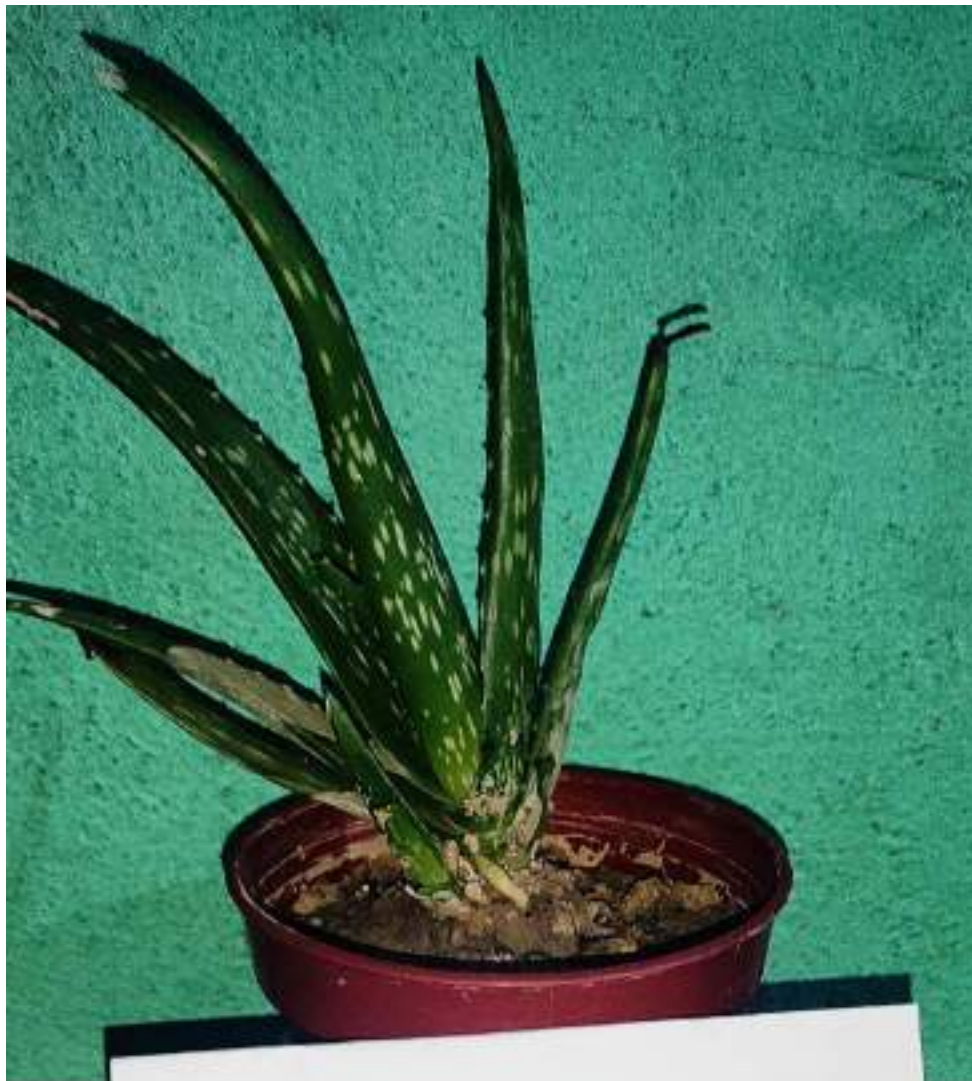
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Topic \Rightarrow Type of medicinal plants and
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Plant name \Rightarrow Aloe Vera.



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Justicia adhatoda (vasaka)

2021/2/25 09:58

Aloe Vera

SHREYA KHAN

DEPARTMENT OF ZOOLOGY, SEMESTER-1

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SESSION- 2020-2021





Plant's Name- Tulsi(*Ocimum tenuiflorum*)
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Session- 2020- 2021

KAZI NAZRUL UNIVERSITY



RANIGANJ GIRLS COLLEGE DEPARTMENT OF ZOOLOGY

TOPIC:- MEDICINAL PLANTS & THEIR USES

B.SC HONOURS 1ST SEMESTER

REGISTRATION NO. : KNU20113001238

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of **2020-21**



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TOPIC :-

MEDICINAL
PLANTS AND
THEIR USES
IN
INDIA

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Secondly, I would also like to thank my parents and friends who helped me a lot in finalizing the idea for doing this project within the limited time frame.

Thank You.

Date :- 025/02/21

Anjali Kumari Singh
Student's Signature

INTRODUCTION

Q. What is Medicinal Plants?

Ans. Medicinal plants are also called medicinal herbs, have been discovered and used in traditional medicine practices since prehistoric times. Plants synthesise hundreds of chemical compounds for functions including defence against insects, fungi, diseases and herbivorous animal. Numerous phytochemical with potential or established biological activity have been indentified. However, since a single plant contains widely diverse phytochemicals, the effects of using a whole plant as medicine are uncertain. Further the phytochemical content and pharmacological actions, if any of many plants having medicinal potential remain unassessed by rigorous scientific research to define efficacy and safety.

Q. How they came in use in India?

Ans. The earliest historical records of herbs are found from the Sumerian civilisation, where hundreds of medicinal plants including opium are listed on clay tablets. The Ebers Papyrus from ancient Egypt, c 1550 Bc, described over 850 plant medicines. The Greek physician Dioscorides, who worked in Roman army, documented over 1000 recipes for medicine using over 600 medicinal plants in De materia medica. C. 60 AD; this formed the basis of pharmacopoeias for some

1500 years. Drug research makes use of ethnobotany to search for pharmacologically active substance in nature, and has in this way discovered hundreds of useful compounds. These include the common drugs aspirin, digoxin, quinine and opium. The compounds found in plants are of many kinds, but most are in four major biochemical classes: alkaloids, glycosides, polyphenols and terpenes.

Q. Why Medicinal Plants are use in India?

Ans Medicinal plant are widely used in non-industrialized societies, mainly because they are readily available and cheaper than modern medicines. The annual global export value of the thousands of types of plants with suspected medicinal properties was estimated to be US\$ 2.2 billion in 2012. In 2017, the potential global market for botanical extracts and medicines was estimated at several hundred billion dollars. In many countries, there is little regulation of traditional medicine but the World Health Organization coordinates a network to encourage safe and rational usage. Medicine plant face both general threats, such as climate change, and habitat destruction, and the specific threat of over-collection to meet market demand.

LIST OF IMPORTANT MEDICINAL PLANTS WITH THEIR USES

1. TULSI

Botanical name :- Ocimum tenuiflorum

Vernacular name :- Holy Basil or Tulsi

Family :- Lamiaceae

Tulsi is known as 'Queen of Medicinal Plants'. This plant holds a significance in the Hindu religion. But it is so much more to itself than just religious significance. It is known for its healing properties, and all require for growth is water.

Uses :- Treat cough, Treat indigestion, Anti-cancer, Good for hair loss, heart diseases, diabetes etc.

2. Ginger

Botanical name :- Zingiber officinale

Vernacular name :- Ginger

Family :- Zingiberaceae

Habitat :- Native to Southeast Asia; now cultivated namely in Kerala, Andhra Pradesh, Uttar Pradesh, West Bengal, Maharashtra.

Uses :- For dyspepsia and prevention of motion sickness, Vomiting of pregnancy, anorexia, bronchitis and rheumatic complaints, etc.

3. Mint :-

Botanical Name :- Mentha spicata

Vernacular Name :- Spearmint, Garden Mint, Pudina

Family :- Labiatae ; Lamiaceae

Habitat :- Cultivated in Punjab, Uttar Pradesh and Maharashtra.

Synonym :- M. Viridis Linn.

Uses :- Carminative, stimulant antispasmodic, antiemetic, dia-phoretic, antiseptic. A tea of dry flowers and leaves is prescribed for tracheobronchitis and hypertension.

4. Cardamom :-

Botanical Name :- Elettaria cardamom

Vernacular Name :- Lesser cardamom, Elaichi

Family :- Zingiberaceae

Habitat :- Cultivated either as pure plantation crop, or as subsidiary to coffee and arecanut in hilly forest regions of Western Ghats in Karnataka and Kerala and in parts of Madurai, the Nilgiris and Tirunelveli in Tamil Nadu.

Uses :- It is used for digestion, problems including heart burn, intestinal spasm, irritable bowel syndrome (IBS), intestinal gas, constipation, liver and gall bladder complaints etc.

5. Amla :-

Botanical Name :- Phyllanthus emblica

Vernacular Name :- Amla, Aonla

Family :- Euphorbiaceae

Habitat :- A deciduous tree of small to medium size upto 5m.

Synonym :- *Emblira officinalis*

Uses :- The root bark is useful in ulcerative stomatitis, and gastroenteritis; The bark is useful in jaundice, myalgia and diarrhoea; The leaves are useful in dyspepsia, inflammation, and dysentery; The fruits are useful in diabetes, cough, asthma, bronchitis etc.

6. Neem

Botanical Name :- *Azadirachta indica*

Vernacular Name :- Neem tree

Family :- Meliaceae

Habitat :- Native to Burma; found all over India

Synonym :- *Melia azadirachta* Linn.

Uses :- Leaf and bark are used for antimicrobial, antifungal, insecticidal, anti-malaria, used in inflammation of gums, gingivitis, sores, boils, oil are used for treatment of vaginal infections and as a mosquito repellent.

7. Aloe Vera

Botanical Name :- *Aloe barbadensis* miller

Vernacular Name :- Indian Aloe, True Aloe, Barbados aloe

Family :- Asphodelaceae; Liliaceae

Habitat :- Aloe vera grows in Humid/Arter environment (yards, field and in and around abandoned houses)

Aloe vera native to the Mediterranean region (North Africa) but it is naturalized throughout the sub-tropical regions of the world.

Uses :- It is used to heal burns due to its soothing, moisturizing and cooling properties, Improve digestive health, Promotes oral health, clears acne, relieves and fissures.

8. Garlic

Botanical Name :- Allium Sativum

Vernacular Name :- Allium cepa

Family :- Amaryllidaceae

Habitat :- Garlic is an ancient cultivated plant which originates from the central Asian steppes. Both the garlic and common name (Allium cepa) found their way from the Far East to Egypt, cultivated by the Egyptians.

Uses :- It is used for condition related to heart and blood system. These conditions include high blood pressure, high level of cholesterol or other fats (lipids) in the blood, and hardening of the arteries.

9. Vinca

Botanical Name :- Catharanthus roseus

Vernacular Name :- periwinkle Madagascar periwinkle

Family :- Apocynaceae

Habitat :- It is most commonly associated with coastal habitats and other sites with sandy soil but also grows in bushland and distributed natural vegetation near urban areas.

Uses :- It is used for relieving muscle pain, prevent diabetes, heal wounds, depression of Central Nervous System.

Mentha spicata (Mint)

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CONCLUSION

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 products that 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 the need to promote them to save the human lives.

These herbal products over today are the symbol of safety in country to the synthetic drugs, that are regarded as unsafe to human being and environment. Although herbs had been prized 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 synthesis is over and people are returning to the naturals with hope of safety and security. It's time to promote them globally.



BIBLIOGRAPHY

Help from Internet following websites links have been used in the completion of this project file :-

- ① en.m.wikipedia.org
- ② www.dabur.com
- ③ www.healthline.com
- ④ nhp.gov.in

Following books are used to have an idea about 'Medicinal Plants and their Uses in India' :-

- ① Khare C.P. Indian Medicinal Plant 2007 Springer Science + Business Media, LLC.



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Paper: (AECC-COURSE)-1

TOPIC: - MEDICINAL PLANTS & THEIR USES IN INDIA

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Topic :- MEDICINAL PLANTS & THEIR USES IN INDIA

- plant introduction is a process of introducing plants (a genotype or a group of genotypes) from their own environment to a new environment. The process of introduction may be new varieties of crop or the wild relatives of crop species or totally a new crop species for the area.

1. Garlic :-

Scientific name: (Allium sativum)



Garlic health benefits:-

- Helps prevent heart disease.
- Improves digestive health.
- Lowers cholesterol and blood pressure.

Common uses:-

- Use as ingredient or garnish for dishes.
- Consume raw.

2. Lemon Balm :-

Scientific name:- (Melissa officinalis)

Lemon balm ^{health} benefits:-

- Treats cold sores
- Soothes menstrual cramps
- Reduces inflammation.



Common uses:-

- Brew leaves for a tea.
- Garnish for dishes and desserts.
- Apply tea or essential oil topically.

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Garlic health benefits:-

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- Treats cold sores
- Soothes menstrual cramps
- Reduces inflammation.



Common uses:-

- Brew leaves for a tea.
- Garnish for dishes and desserts.
- Apply tea or essential oil topically.

3. Neem:

Scientific Name:- *Azadirachta indica*.

Health Benefits of Neem:-

- Neem leaf is used for leprosy
- eye disorders, bloody nose, intestinal worms.
- The leaf is also used for birth control and cause abortions.



4. Aloe vera:-

Scientific name:- *Aloe barbadensis miller*.

Health benefits of Aloe vera:-

- Hydration, The aloe plant is very water-dense, so it's an ideal way to prevent or treat dehydration.
- Liver function.....
- Beauty hacks .
- For clear skin.....
- Nutritious boost.....
- Digestive benefits.



Tulsi :- (Holy Basil)

Scientific name :- (Ocimum sanctum)

Health benefits of Tulsi :-

- Regular consumption of tulsi may lower blood pressure and cholesterol by regulating cortisol levels.
- Regular consumption may lead to better sleep.

Common Uses :-

- Anti-aging
- Treats kidney stones
- Relieves Fever.



Tulsi

CATNIP :-

Scientific name :- (Nepeta catanica)

Catnip health benefits :-

- Accelerates recovery from colds and fevers.
- Brew leaves for a tea.
- Relieves stomach discomfort.
- Repels bugs and relieves irritation from bug bites.



ST. JOHN'S WORT :-

Scientific name:- *Hypericum perforatum*.

St. John's wort health benefits:-

- Helps relieve symptoms of depression.
- Soothes skin irritation.
- Reduces inflammation.

Common uses:

- Consume as a pill
- Brew fresh flowers for tea.

15. ST. JOHN'S WORT



8. Rosemary :-
Scientific name:- (*Rosmarinus officinalis*)

Rosemary health benefits:-

- Improves blood circulation.
- Improves memory and enhances overall.
- Treats bad breath.

13. ROSEMARY



Common uses:-

- Apply essential oil topically.
- Sprinkle as a garnish for dishes.
- Brew dried leaves for a tea.

Cinchona :-

Scientific name :- Cinchona Succinubra

Cinchona health benefits :-

- cinchona is used for increasing appetite; and promoting the release of digestive juices.



Common uses :-

- people use the bark to make medicine.
- cinchona is used for increasing appetite.
- It is also used for blood vessel disorders including hemorrhoids, varicose veins and leg cramps.

10. Peppermint :-

Scientific name :- (Mentha x piperita)

Peppermint health benefits :-

- Relieves allergies
- soothes muscle pain
- Highly antibacterial.
- supports digestive health.

12. PEPPERMINT



CONCLUSION

- Medicinal plants are inseparable from local livelihoods because they have long been collected, consumed and managed through local customs and knowledge.

BIBLIOGRAPHY

- WEBLIOGRAPHY



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DEPARTMENT OF ZOOLOGY

**SUBJECT :- ENVIRONMENTAL STUDIES
PAPER-(AECC-COURSE)-1**

TOPIC :-MEDICINAL PLANTS & THEIR USES IN INDIA

B.SC HONOURS 1ST SEMESTER

REGISTRATION NO.- KNU20113001387

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Date :-

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INTRODUCTION

The term "Medicinal Plant" include various types of plants used in herbalism. It is the use of plants for medicinal purposes, and the study of such uses. Medicinal plants such as Aloe, Tulsi, Neem, Turmeric and Ginger cure several common ailments. They are considered as home remedies in many part of the country.

Benefits of Medicinal Plants:-

- They have a holistic approach and aid in proper absorption and digestion.
- They are not disease ~~the~~ specific but act as a preventive medicine the positively effects the overall health and well-being by boosting the immune system.
- They are self-contained and nutritive in nature, therefore, are non-toxic and harmless.

Important of Medicinal Plants:-

The nutritive value that they pack are highly recommended for their healing powers. Known to induce no side effects, they have a unique aroma and flavor and when consumed regularly, they act as a perfect mechanism to bring about a balanced harmony between mind and body. They rejuvenate the whole system instead of focusing on one specific organ or body part.

Spices & Their Medicinal Plants:-

- Ayurvedic herbs and spices such as black pepper, Cinnamon, aloe, sandalwood, ginseng, red clover, burdock, bayberry and safflower are used to treat wounds, sores and boils.
- Herbs and spices come from different part of the plant are used to impart an aroma and taste to food. Several herbs have therapeutic properties such as antidiabetic, anti-inflammatory, antioxidative, antihypertensive and antimicrobial activities. Therefore, fortification of dairy foods with herbs and spices could help to provide functional dairy products with nutritional and medicinal values.

MEDICINAL PLANTS

&

THEIR USES

IN
INDIA

NEEM TREE

Scientific name - Azadirachta indica

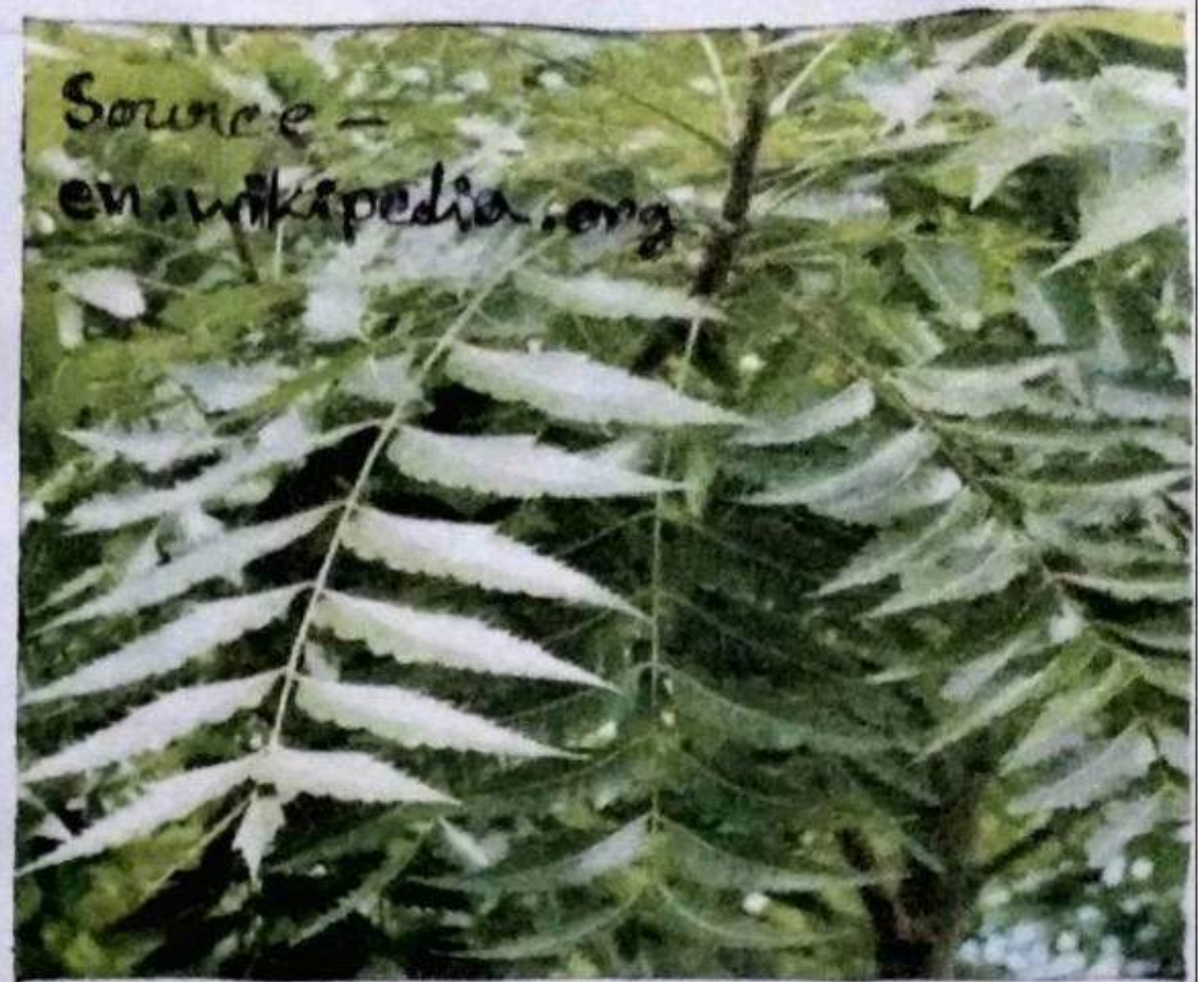
Family - Meliaceae

Kingdom - Plantae

Characteristics -

- i. Neem trees can reach 15-30 metres (49-98 feet) in height.
- ii. They have attractive rounded crowns and thick furrowed bark.
- iii. They have compound leaves.

Uses - Nearly all parts of the neem tree are useful, and many of its medicinal and cosmetic uses are based on its antibacterial and antifungal properties, etc.



TULSI

Scientific name - Ocimum tenuiflorum

Family - Lamiaceae

Kingdom - Plantae

Characteristics -

- i. Tulsi is an upright bushy shrub that grows up to 18 inches.
- ii. The leaves are green coloured with a sharp aroma and flavour.

Uses - Tulsi can sort out many medical problems. -

- Tulsi can cure fever,
- Tulsi leaves are used to treat skins problems like acne, blackheads and premature ageing,
- Tulsi is used to treat insect bites,
- Tulsi is also used to treat heart disease and fever,
- Tulsi is used to cure fever, common cold and sore throat, headaches and kidney stones, Asthma etc.

ALOE VERA

Scientific name - Aloe Vera

Family - Asphodelaceae

Kingdom - Plantae

Characteristics -

i. Aloe vera is a stemless or very short-stemmed plant growing to 60-100 cm (24-99 in) tall, spreading by offsets.

ii. The margin of the leaf is serrated and has small white teeth.

Uses - There are plenty of ways you can use aloe vera, both topically and internally, ● Heals burns. Due to its soothing, moisturizing, and cooling properties, aloe vera is often used to treat burns. ● Improves digestive health, ● Clears acne, ● Relieves anal fissures.



Source - en.wikipedia.org



TURMERIC

Scientific name - Curcuma longa

Family - Zingiberaceae

Kingdom - Plantae

Characteristics -

i. Turmeric plants reach about 1 m (3.3 feet) in height and bear long, simple leaves with long petioles.

ii. The rhizomes are yellowish brown, while the internal surface is orange in color.

Uses - Turmeric is commonly used for conditions involving pain and inflammation, such as osteoarthritis. It is also used for hay fever, depression, high cholesterol, a type of liver disease, and itching.

GINGER

Scientific name - Zingiber officinalis

Family - Zingiberaceae

Kingdom - Plantae

Characteristics -

- i. Ginger root is beige in color with a knotted, rough appearance.
- ii. The part of the plant above the ground is a foot long upright stem with long, narrow leaves.



Source -
en.wikipedia.org

Uses - Below are some of the possible medicinal uses of ginger, →

- Reducing gas and improving digestion,
- Relieving nausea,
- Easing a cold or the flu,
- Supporting cardiovascular health,
- Lowering cancer risk.



GREEN CHIRETTA

Scientific name - Andrographis

Paniculata

Family - Acanthaceae

Kingdom - Plantae

Characteristics -

- i. The plant grows as an erect herb to a height of 30-110 cm (12-43) in moist, shady places.
- ii. The lance-shaped leaves have hairless blades measuring upto 8 cm (3.1 in) long by 2.5 cm (0.98 in).

Uses - People use the parts that grow above the ground and the root to make medicine. Some people take chiretta by mouth for fever, constipation, upset stomach, loss of appetite, intestinal worms, skin diseases, liver inflammation, stomachinflammation, stomachinflammation, and cancer.

GARLIC

Scientific name - Allium sativum

Family - Amaryllidaceae

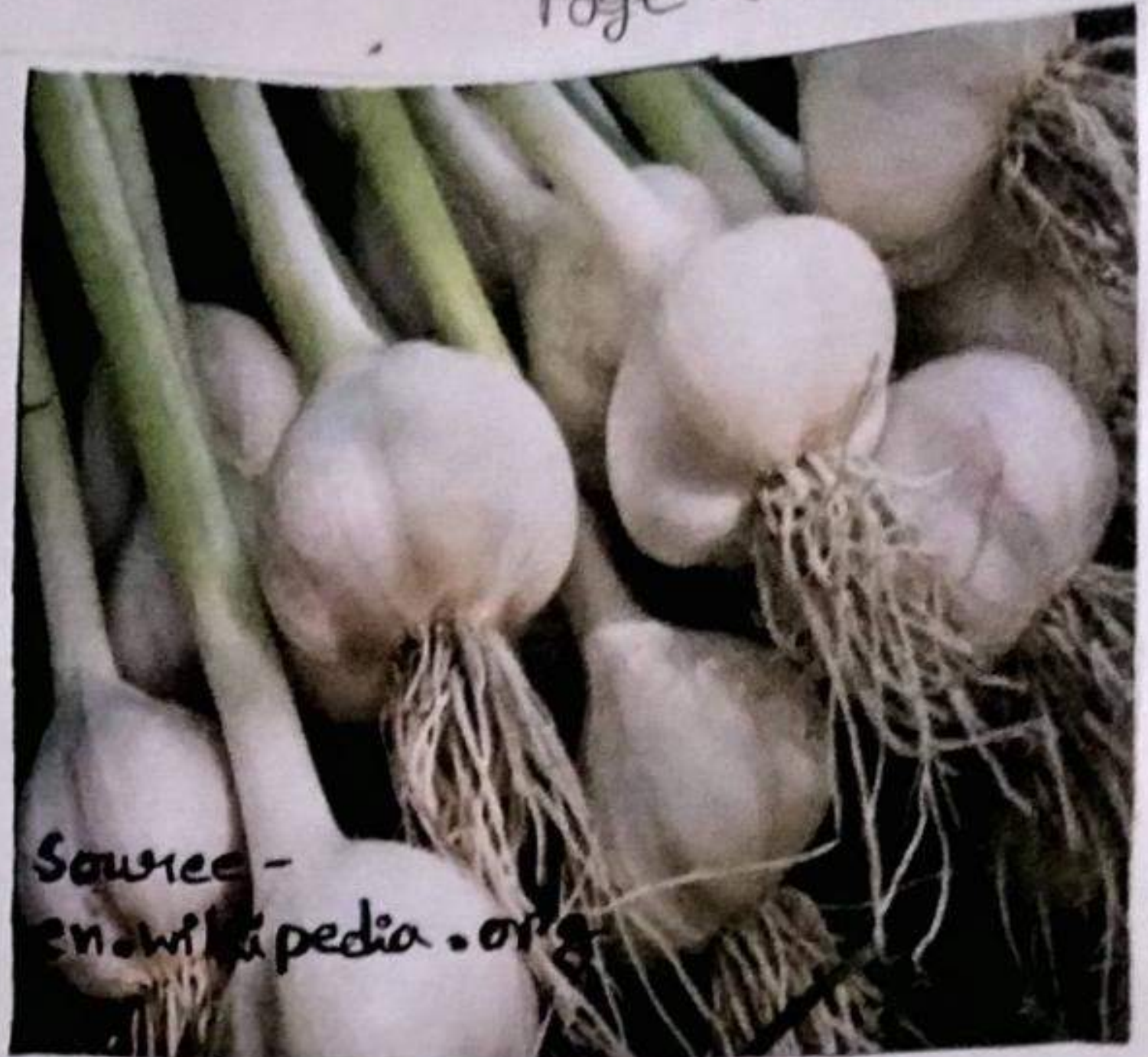
Kingdom - Plantae

Characteristics -

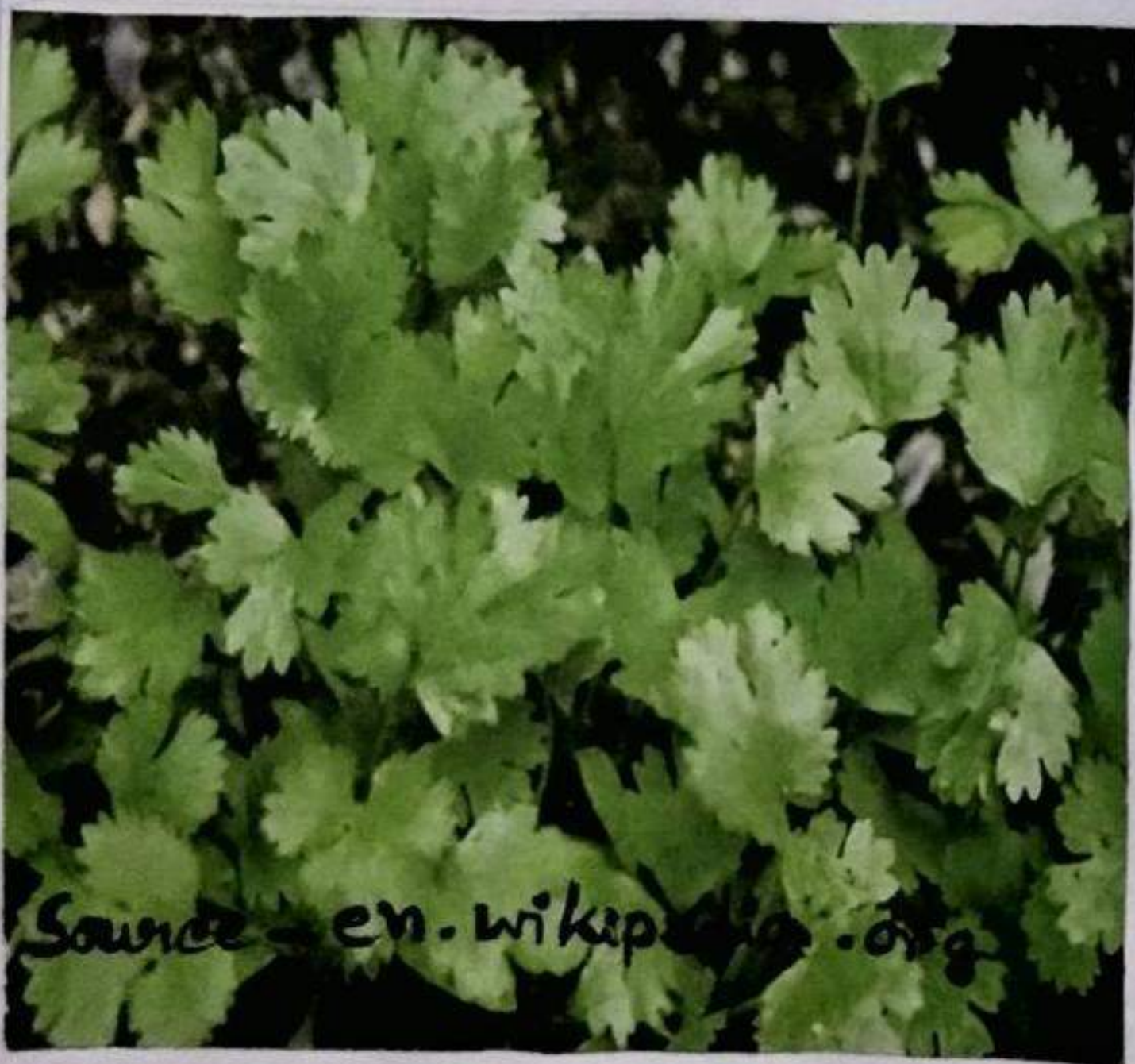
i. They have a characteristic pungent, spicy flavor that mellows and sweetens considerably with cooking.

ii. The distinctive aroma is mainly due to organosulfur compounds including allicin present in fresh garlic.

Uses - Garlic is most commonly used for conditions related to the heart and blood system. These conditions include high blood pressure, high levels of cholesterol or other fats in the blood, and hardening of the arteries.



Source -
en.wikipedia.org



Source - en.wikipedia.org

CORIANDER

Scientific name - Coriandrum

sativum

Family - Apiaceae

Kingdom - Plantae

Characteristics -

i. The leaves of the plants are variable in shape, broadly lobed at the base of the plant, and slender and leathery higher on the flowering stems.

ii. It is a soft, hairless plant.

Uses - In foods, coriander is used as a culinary spice and to prevent food poisoning. In manufacturing, coriander is used as a flavoring agent in medicines and food and tobacco as a fragrance in cosmetics and soaps.

INDIAN SNAKEROOT

Scientific name - Rauwolfia serpentina

Family - Apocynaceae

Kingdom - Plantae.

Characteristics -

i. Sarpagandha is an erect, evergreen shrub, 15 to 45 cm high.

ii. Its leaves are large, in whorls of three - dark green above and pale green below. The flowers are white, pinkish or red, occurring in whorls.

Uses - In folk medicine, plant extracts of sarpagandha has been used to treat colic, cholera and fever. The root of this plants have been used for treating poisonous insect stings and snake bites.



Source -
en.wikipedia.org



Source -
en.wikipedia.org

THANKUNI

Scientific name - Centella asiatica

Family - Apiaceae

Kingdom - Plantae.

Characteristics -

i. The plant is a small trailing herb and it is the only species of centella found in India.

ii. Leaves are fleshy, orbicular to reniform and dentate.

Uses - The leaf juice is used as a good health tonic and also gives relief from hypertension, CNS and gastrointestinal diseases. Thankuni extract is incorporated with dahi to improve the medicinal value. Whole plant is used for medicinal purpose.

CONCLUSION

Within the study area, medicinal herbs were the main ingredients of traditional therapies, and they were considered a main lifeline and frequently were the first choice.

About 55% plants were ethnomedicinal, and about 37% of ethnomedicinal plants possessed the highest informant consensus value (0.86-1.00).

Use of *Condyceps sinensis* as an aphrodisiac, *Beberis asiatica* for eye problems, *Bergenia ciliata* for disintegration of calculi, *Sapindus mukerossi* for toothache were the most frequently mentioned.

These species possess potential for pharmacology.

BIBLIOGRAPHY

- Parikh, K.M. 1993. Traditional Medicinal Plants of India, *Acta Horticulturae*. 332. 43 - 53.
- Joshi, M.C. 2019. Hand Book of India Medicinal Plants.
- Bhutya, R.K. 2011. Ayurvedic Medicinal Plants of India (Vol.1).



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SUBJECT:-ENVIRONMENTAL STUDIES
PAPER(AECC-COURSE)-1

TOPIC-MEDICINAL PLANTS AND THEIR USES IN INDIA

NAME-ANTARA MUKHERJEE

BSC HONOURS 1ST SEMESTER

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ROLL NO-

COLLEGE ROLL NO- 121

SESSION-2020-21

MEDICINAL PLANTS

AND

THEIR USES IN

INDIA

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Date: 24.02.21

Antara Mukherjee
student's signature

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INTRODUCTION

Plants that possess therapeutic properties or exert beneficial pharmacological effects on the human body are generally designated as medicinal plants. The medicinal plants have been used for treatment of illness and diseases. Ancient Chinese scriptures and Egyptian papyrus hieroglyphics describe medicinal uses for plants. Indigenous cultures used herbs in their healing rituals, while others developed traditional medical systems in which herbal therapies were used. Researchers have found that people in different parts of the world tend to use the same or similar plants for the treating same illnesses.

Recently, the World Health Organization (WHO) estimated that 80% of people worldwide rely on herbal medicines partially for their primary health care. In Germany, about 600-700 plant based medicines are available and are prescribed by some 70% of German physicians.

WHAT DO YOU MEAN BY MEDICINAL PLANT?

Any plant whose roots, leaves, seeds, bark or plant part is used for therapeutic, tonic, purgative, or other health-promoting purposes.

Medicinal plants can be defined as the plants that possess therapeutic properties or exert beneficial pharmacological effect on the human or animal body.

IMPORTANCE OF MEDICINAL PLANTS

Medicinal plants play a key role in human health care. About 80% of the world population relies on the use of traditional medicine, which is predominantly based on plants. Even medicinal plants naturally synthesize and accumulate some secondary metabolites, like alkaloids, sterols, glycosides, resins, lactones etc.

- ❑ Some medicinal plants are used to neutralize the acid produced by the stomach. Herbs such as marshmallow root and leaf. They serve as antacids. The healthy gastric acid needed for proper digestion is retained by such herbs.
- ❑ Turmeric, Ginger, Cinnamon, Basil etc are helpful in promoting good blood circulation. Therefore, they are used as cardiac stimulants.
- ❑ Certain medicinal plants have disinfectant property, which destroys disease causing germs. They also inhibit the growth of pathogenic microbes that cause communicable diseases.
- ❑ Indian sages were known to have remedies from plants which act against poisons from animals and snake bites.

NAME - KALMEGH (KING OF BITTERS)

Scientific name \rightarrow Andrographis paniculata

Family \rightarrow Acanthaceae

Kingdom \rightarrow plantae

- **CHARACTERISTICS:** It is an erect, annual herb and 30-90 cm tall with upper part of stem quadrangular while the lower part nearly rounded stem.



Source \rightarrow <http://image.cupl.com/ma8evnNXRnSg> (Internet)

- **USES:**
 - i) Kalmegh kills intestinal worms and support intestine.
 - ii) It protects skin from pimples and reduces swelling and cuts down exudation from capillaries.
 - iii) It promotes mucus discharge from the respiratory system and protects the liver and gall bladder.

NAME - RAUWOLFIA (SARPAGANDHA)

Scientific name \rightarrow Rauwolfia serpentina

Family \rightarrow LamApocynaceae

Kingdom \rightarrow plantae

- **CHARACTERISTICS:** Sarpagandha is an erect, evergreen shrub, merely 15 to 45 cm high. Its leaves are large and pale green below.



Source \rightarrow <http://image.app/4e5XXA8t3uytyXjE> - Google

- **USES:**
 - i) Roots, bark yields alkaloid reserpine used for treatment of schizophrenia and other mental disorders.
 - ii) widely employed for treating high blood pressure.
 - iii) Sarpagandha is very useful in treating chronic recurrent fever.

NAME - NEEM

Scientific name → Azadirachta indica

Family → Meliaceae

Kingdom → Plantae

● CHARACTERISTICS :-

Neem trees are fast growing medium-sized trees, usually attaining a height of 50 to 65 feet. Its trunk is short and straight with deeply fissured bark.

● USES :-

i) Neem may help fight plaque buildup and prevent gingivitis.

ii) The topical application of neem oil maybe helpful in the treatment of acne and other skin conditions due to its anti-inflammatory and antimicrobial properties.

iii) Neem leaf is used for intestinal worms, loss of appetite, diabetes and liver problems.



Source - <http://images.app.goo.gl/RgFb016dn3z2a70v8>

NAME - ALOEVERA

Scientific name → Aloe vera

Family → Asphodelaceae

Kingdom → plantae

● CHARACTERISTICS :- Aloevera

is a stemless or very short-stemmed plant growing to 60-100cm tall spreading by offsets. The leaves are thick and fleshy green to grey green.



Source - <http://app.11214wfs7dm0t4xv67> (internet)

● USES :- i) For minor burns, apply aloevera gel to the affected area up to three times. It protects the area.

ii) Aloevera contains powens to boost skin cell reproduction, reduce redness and fight skin inflammation.

ii) It helps to boost the immune system and also helps in curing wounds.

NAME - HOLY BASIL

Scientific name → *Ocimum tenuiflorum*

Family → *Lamiaceae*

Kingdom →



Source - <http://images.app.lykpic.com/1587584045A> (internet source)

● **CHARACTERISTICS**: Holy basil plant is a small annual or short-lived perennial shrub, up to 4 metres in height. The fragment leaves are green or purple depending on the variety.

● **USES**: i) Tulsi has anti-bacterial and anti-viral properties which help to fight infections.

ii) Tulsi contains compounds acemosides A and B. These compounds reduce stress and balance the neurotransmitters serotonin and dopamine in the brain.

iii) It can help protect against infection, ease joint pain and protect the stomach.

NAME - MALABAR NUT

Scientific name → *Justicia adhatoda*

Family → *Acanthaceae*

Kingdom → *plantae*

● **CHARACTERISTICS**: *Justicia adhatoda* is a shrub with lance-shaped leaves 10 to 15 centimeters in length by four wide.



● **USES**: i) The malabar nut has natural antimicrobial and antibacterial properties. That's why it's long been used to treat such conditions as respiratory infections.

ii) It can reduce the presence of bacteria in drinking water.

iii) It is also used for upper airway infections, common colds, cough, asthma.

NAME - GARLIC

Scientific name → Allium sativum

Family → ALLIACEAE

Kingdom → Plantae

● CHARACTERISTICS :-

Garlic is a plant with long, flat grass-like leaves and a papery hood around the flowers. The stalk rises directly from the flower bulb, which is the part of the plant used as food and medicine.



Source - <http://images/eeVFEzx4ENNY7NBICA.google>

● USES :- i) Garlic has anti-inflammatory benefits and helps blood flow more easily through the body.

ii) Garlic can also reduce cardiovascular disease risk by lowering cholesterol.

iii) There is some evidence that garlic can help reduce bone loss by increasing estrogen in females.

NAME - AMLA

Scientific name → Embilica officinalis

Family → Euphorbiaceae

Kingdom → Plantae

● CHARACTERISTICS :-

Amla are small, round berries with light-green skin. The skin is almost translucent, with 6 to 8 faint yellow striations, making the Amla appear to be segmented.



<https://imgex.app.goo.gl/EzR070wqLFLoasPv5> (internet)

● USES :- i) High concentrations of vitamin C in amla helps the body recover from illness.

ii) Amla berries are rich in vitamin A, which is key to improving eye health.

iii) The antioxidants and vitamins found in amla berries offer several health benefits.

NAME - ASHWAGANDHA

Scientific name → Withania somnifera

Family → Solanaceae

Kingdom → Plantae

- CHARACTERISTICS :- Ashwagandha is an ancient medicinal herb, grows up to a height of 1-5 meters. Its all parts are covered with whitish, stellate trichomes.



- USES :- i) Ashwagandha anishtam is extremely useful for treating different types of psychotic problems like depression, dementia etc.
- ii) The anti-stress and anxiolytic properties of ashwagandha help in calming the mind and body.
- iii) This health tonic is a liquid preparation of the ashwagandha herb for general debility and improving the immunity.

NAME - THANKUNI (GOTUKOLA)

Scientific name → Centella asiatica

Family → Apiaceae

Kingdom → Plantae

- CHARACTERISTICS :- Centella grows in temperate and tropical swampy areas in many regions of the world.



The stems are slender, connecting plants to each other.

The leaves are borne on petioles, around 2 cm (0.79 in).

- USES :- i) Centella Asiatica helps in the improvement of memory and intelligence.
- ii) The herb is used for the treatment of common cold, urinary tract infection, cholera etc.
- iii) It is used to treat many skin related disorders such as eczema, erysipelas etc.

Source :- <https://image.app.google>

CONCLUSION

- 1) Medicinal plants can be a good alternative for many disease and conditions. They are low cost and tend to have fewer side effects.
- 2) People are aware about medicinal plants and they know their uses.
- 3) Medicinal plants are inseparable from local livelihoods because they have long been collected, consumed, and managed through local customs and knowledge.
- 4) Roots and/or shoots that are collected for medicinal purpose are a threat for their regeneration.

BIBLIOGRAPHY

- A. Ross, Iran, MEDICINAL PLANTS OF THE WORLD, volume 3, october 2007
- Joshi, M. C., HAND BOOK OF INDIAN MEDICINAL PLANTS, 2007, Scientific publication, Jodhpur, India
- Ram Krishna, Akula, INDIAN MEDICINAL PLANTS, 26 october 2020

WEBLOGRAPHY -

- www. Science direct. Com
- <https://nhp.gov.in/> Introduction - and importance - of - medicinal - plants - and herbs - mti



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SUBJECT:-ENVIROMENTAL STUDIES

PAPER-(AECC-COURSE)-1

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MEDICINAL

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USES

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Date:- 25.02.2021

Rupsa Khan

Student's name

INTRODUCTION

Medicinal plants are considered as a rich resources of ingredients which can be used in drug development either pharmacopoeial, non-pharmacopoeial or synthetic drugs. Apart from that, these plants play a critical role in the development of human cultures around the whole world.

●. What do you mean by medicinal plants?

→ Medicinal plants can be defined as the plants that possess therapeutic properties or exert beneficial pharmacological effect on the human or animal body.

From:- Natural products and Drug Discovery, 2018.

●. Where are medicinal plants found?

→ Among ancient civilisations, India has been known to be rich repository of medicinal plants. The forest in India is the principal repository of large number of medicinal and aromatic plants, which are largely collected as raw

materials for manufacture of drugs and perfumery products

Types of Medicinal plants and Their uses:-

1) Aloe vera:-

Scientific name:- Aloe vera.

Family :- Asphodelaceae.

Kingdom:- plantae.



Aloe vera is a succulent plant species of the genus Aloe. It has Antioxidant, antibacterial properties. It is useful in wound healing. Aloe vera gel absorbs easily making it ideal for oily skin.

2) Pudina/Mint:-

Scientific name:- Mentha

Family :- Lamiaceae

Mentha is a genus of plants in the family Lamiaceae. pudina leaves can be used fresh or dried in a spectrum of culinary dishes. It is also useful skin dryness, pimples, acne.



3) Neem:-

Scientific name:- *Azadirachta indica*

Family:- *Meliaceae*

Order:- *Sapindales*



Neem is a natural herb that comes from the neem tree, other names for which include *Azadirachta indica* and indian lilac. Neem has been used as an insecticide, insect repellent and in traditional medicine to treat malaria, diabetes, worms and skin diseases.

4) Holy Basil/Tulsi:-

Scientific name:- *Ocimum tenuiflorum*

Family:- *Lamiaceae*

Order:- *Lamiales*

Higher classification:- Basil



Ocimum tenuiflorum, commonly known as holy basil or tulsi, is an aromatic perennial plant in the family *Lamiaceae*. Tulsi leaves are used to treat skin problems like acne, blackheads and premature aging. It is used for fever, common cold, sore throat, headache and kidney stone. Also, it is useful in Asthma. It is useful in Diabetes.

5) Green chiretta / Kalmegh :-

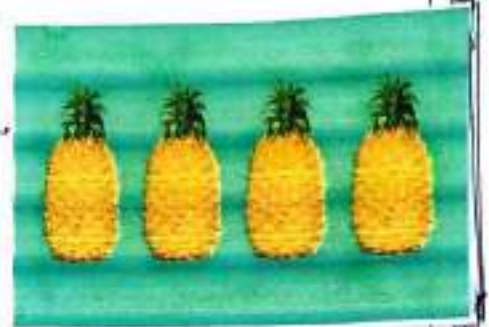
Scientific name :- *Andrographis paniculata*.
Order :- Lamiales.



Kalmegh is a plant which is also known as "Green chiretta" and the "King of Bitters". Kalmegh is widely used as a stomachic, tonic, anti-fertility, antibacterial and anti-oxidant agent.

6) Pineapple :-

Scientific name :- *Ananas comosus*.
Hindi name :- Ananas.



Higher classification :- Pineapples.

Pineapple is an incredibly delicious and healthy tropical fruit. Pineapple Health Benefits. It is used to sore throat, Diabetes, Heart Disease, obesity. It originated in South America, where it has been cultivated for many centuries.

7) Garlic :-

Scientific name :- *Allium sativum*.
Family :- Amaryllidaceae.



Garlic is a species in the onion genus, *Allium*. Garlic contains compounds with potent medicinal properties. It is used for conditions related to the heart and blood pressure, Dysentery, Ring worm and wounds.

8) Elephant creeper :-

Scientific name: - *Argyria nervosa*.

Hindi name: - Vaidhadaru



It is called Elephant creeper because of the large leaves which look like elephant ears. The plant is used for ornamental purpose. Rheumatism and nervous disorders. It is used for Diabetes, Skin Diseases and wounds.

9) Nut grass :-

Scientific name: - *Cyperus rotundus*

Family: - Cyperaceae

Hindi name: - Nagarmotha



Nut grass also called nutsedge, is a perennial, which is a plant that comes back time after time.

Nut grass has been used in traditional Chinese medicine and Indian Ayurvedic medicine for its beneficial properties. It is used for Fever, Diabetes and Solar Dermatitis.

10) Eagle wood :-

Scientific name: - *Aquilaria agallocha*, Roxb.

Hindi name: - Agarkasht

Eagle wood is a fragrant dark, resinous wood used in incense, perfume and small carvings. Eagle wood is a large evergreen tree growing up to 23m height and 2.3m in girth. It is used for Bed wetting, Incompetency of urinary Bladder.



CONCLUSION

- People are aware about medicinal plants and they know their uses.
- According to them medicinal plants are best and medicinal plants show fast relieving properties.
- Even after knowing about the benefits of the medicinal plants they still prefer antibiotics as they said "who will waste time in collecting and preparing these medicinal plants for medicinal use."

BIBLIOGRAPHY

- Zafar, R. (1994). Medicinal plants of India. CBS publishers and Distributions, 485 Jain Bhawan, Bholu Nath Nag.
- Brandis, D. (1906). Indian Trees. Periodical Experts Book Agency, Delhi, India (Reprinted in 1978). 667 p.
- Troup, R. S. (1921). The Silviculture of Indian Trees (Volume I, II & III). International Book Distributions, Book seller and publisher, 9/3 Rajpur Road, Dehra Dun - 248001, India (Reprinted in 1986).



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RANIGANJ GIRLS' COLLEGE

DEPARTMENT OF ZOOLOGY

SUBJECT:- ENVIRONMENTAL STUDIES PAPER-(AECC-COURSE)- 1

TOPIC- MEDICINAL PLANTS & THEIR USES IN INDIA

B.SC ZOOLOGY HONOURS (1st SEMESTER)

NAME:- SOUMITA LAYEK

REGISTRATION NUMBER:- KNU20113001569

ROLL NO:-

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Date :- 25.02.2021

Sourmita Layek
Student's Signature

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Introduction of Medicinal plants

The term "medicinal plant" include various types of plants used in herbalism (herbology or "herbal medicine"). It is the use of plants for medicinal purposes, and the study of such uses.

The word "herb" has been derived from Latin word, "herba" and an old French word "herbe". Now a days, herb refers to any part of the plant like fruit, seed, stem, bark, flower, leaf, stigma or a root, as well as a non-woody plant.

Earlier, the term "herb" was only applied to non-woody plants, including those that come from trees and shrubs.

These medicinal plants are also used as food, flavoroid, medicine or perfume and also in certain spiritual activities.

• What do you mean by medicinal plant?

→ Medicinal plants can be defined as the plants that possess therapeutic properties or exert beneficial pharmacological effect on the human or animal body. From: Natural Products and Drug Discovery, 2018.

• Where are medicinal plants found?

→ Among ancient civilisations, India has been known to be rich repository of medicinal plants. The forest in India is the principal repository of large number of medicinal and aromatic plants, which are largely collected as raw materials for manufacture of drugs and perfumery products.

Aloe Vera

Family: Asphodelaceae

Kingdom: Plantae

Scientific name: Aloe vera

Order: Asparagales

Aloe vera, sometimes described as a "wonder plant", is a short

-stemmed shrub. Aloe is a ^{source - <https://images.apto.goo.gl/NhS2uAK6U7PdpxX9>} genus that contains more than 500 species of flowering succulent plants. Many Aloes occur naturally in North Africa. The leaves of Aloe vera are succulent, erect and form a dense rosette. It is a thick, short-stemmed plant that stores water in its leaves.

It is best known for treating skin injuries.

CinchonaScientific Name: Cinchona

Order: Gentianales

Family: Rubiaceae

Kingdom: Plantae

Cinchona officinalis is a medicinal plant, one of several cinchona species used for the production of quinine, which is an anti-fever agent. It is especially useful in the prevention and treatment of malaria. Other alkaloids that are extracted

from this tree include cincho-

-nine, cinchonidine and quinidine. ^{source - <https://www.wikipedia.org>}

The cinchona - a large shrub or small tree - is indigenous to South America.



Garlic

Hindi Name: Lashun.

Botanical Name: Allium sativum

Rank: Species

Family: Amavyllidaceae

Kingdom: Plantae.

Garlic is a species in the onion genus, Allium. Its close relatives include the onion. It is also the relative of shallot, leek, chive, welsch onion and chinese onion. It is native to central Asia and northeastern Iran and has long been a common seasoning world wide, with a history of several thousand years of human consumption and use.

Garlic is most commonly used for

conditions related to the heart and blood system. These conditions include high blood pressure, high levels



of cholesterol or other Source - <https://images.app.goo.gl/hFgobmuS4JTP1Wc9A> fats (lipids) in the

blood (hyperlipidemia), and hardening of the arteries (atherosclerosis).

Holy Basil

Hindi Name: Tulsi

Botanical Name: Ocimum Sactum Linn

Family: Lamiaceae

Kingdom: Plantae

Higher classification: Basil

Order: Lamiales

Rank: Species

Holy basil, (*Ocimum tenuiflorum*), also called tulsi or tulasi, flowering plant of the mint family (Lamiaceae) grown for its aromatic leaves. Holy basil is native to the Indian subcontinent and grows throughout Southeast Asia. The plant is widely used in Ayurvedic and folk medicine; often as an herbal tea for a variety of ailments, and is considered sacred in Hinduism. It is also used as a culinary herb with a pungent flavour that intensifies with cooking. It is



Considered an agricultural weed and an invasive species in some areas outside its native range.

Source - <https://images.app.goo.gl/NW5YXBoHUj57WSXK7>

Kalmegh

Hindi Name: Kalmegh.

Botanical Name: Andrographis paniculata

Rank: Species

Order: Lamiales

Family: Acanthaceae

Kingdom: Plantae

Kalmegh is a plant which is also known as "Queen chiretta" and the "King of Bitter". It is used for various medicinal purposes and is bitter in taste. It is mainly used for liver problems as it protects the liver against damage caused by free radicals due to its antioxidant and anti-inflammatory activity. The English name of Kalmegh is Creat.

Dried leaves and tender shoots are used of this plant in medicine.



Kalmegh is an annual herb found through India, specially in dense forests. It is under cultivation in many states of India.

Kalmegh requires medium fertile sandy loam to clay soil.

Source - <https://images.app.goo.gl/aUeU8xtVA8m6vQfz8>

Thyme leafed gratiolas

Scientific name : Bacopa monnieri

Family : Plantaginaceae

Hindi Name : Brahmi

Brahmi is used for Alzheimer's disease, improving memory, anxiety,

attention deficit hyperactivity disorder (ADHD), allergic

conditions, irritable bowel syndrome, and as a general

tonic to fight stress. It is known by the MP8 common names water hyssop, water hyssop, brahmi, thyme-leafed gratiolas, herb of grace, and Indian pennywort.



Sourced - <https://ya1x5299ajax6b>

Thankuni Leaves

Scientific name : Centella asiatica

Family : Apiaceae

Order : Apiales

Centella asiatica, commonly known as Crotu Kala, brahmi, Indian pennywort and Asiatic pennywort, is a herbaceous, perennial plant in the flowering plant family

Apiaceae. It is native to the wetlands in Asia. It is used as a culinary vegetable and as a medicinal herb.



Sourced - <https://images.app.goo.gl/J93fPANPssgQe3hh8>

It is indigenous to the Indian Subcontinent, Southeastern Asia and Wetland regions of the Southeastern US.

Malabar Nut

Hindi Name - Adusa / Vasaka

Botanical Name - Adhatoda Vasica Nees pennd

Species: *J. adhatoda*

Kingdom: Plantae

Family: Acanthaceae

Order: Lamiales

Malabar nut is plant. People use the leaf to make medicine. It is a medicinal plant native to Asia, widely used in Siddha Medicine, Ayurvedic, homeopathy and Unani systems of medicine.

Malabar nut is used to loosen chest congestion, open the breathing tubes (bronchi) and treat spasms. It is used for upper airway

infections, common colds, cough, asthma, and tuberculosis. Besides Tooth

plaque, Early research shows

that using a toothpaste containing mint herbs, including malabar nut leaf,

might prevent plaque growth on the teeth.

The effects of Malabar nut on a nursing infant are unknown at this time.



Source - <https://images.app/9497E7nTR6yx9e958>

BIBLIOGRAPHY

- Vaze. Prashant, The Economical Environmentalist (2009)
- WWW.gardeningknowhow.com,
WWW.medicalnewstoday.com,
WWW.webmd.com, WWW.healthline.com
- WEBLIOGRAPHY



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Topic: Medicinal plants and their uses in India

BSc. honours 1st semester

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Submita Pal
Zoology Programme
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Medicinal plants

and

their uses in India

Introduction:

Among ancient civilisations, India has been known to be rich repository of medicinal plants. The forest in India is the principal repository of large number of medicinal and aromatic plants, which are largely collected as raw materials for manufacture of drugs and perfumery products.

Treatment with such 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.

Medicinal plants are considered as a rich resources of ingredients which can be used in drug development either pharmacopoeial or non pharmacopoeial or synthetic drugs. Moreover, some plants are considered as important source of these plants, nutrients and minerals.



Analytical descriptions
of
Topic

1) Malabar Nut:

Scientific Name: Justicia athoda

Characteristics: i) The plant's native range is the India.
ii) It contains vasicine and quinazoline alkaloid.

iii) Malabar Nut is used to loosen chest congestion, open the breathing tubes (bronchi) and treat spasms. It used for upper airway infections, common colds, cough, asthma and tuberculosis.

2) Lavender:

Scientific Name: Lavandula

Characteristics: i) The plant is native to old world, found in Cape Verde and the Canary Islands and from Europe to Africa, Southeast Asia including India.

ii) It contains linalyl acetate (30-55%), linalool (20-35%), tannins (6-10%) and many other phytochemicals.

iii) It cures - insomnia, eczema, mild pain, rheumatism, anxiety and depressions.

3) Mint:

Scientific name: Mentha

Characteristics: i) The plant has a subcosmopolitan distribution across Europe, Africa, Asia.



- ii) It contains flavonoids and kaempferol
- iii) It helps in upset stomach, indigestion, inflammations, double blind trial and allergies.

4) Spreading Hogweed:

Scientific Name: *Boerhavia diffusa*

Characteristics: i) This plant is widely dispersed occurring throughout India, the Pacific, and Southern United States

- ii) It contains a protein called BDP-30, presumably a ribosome-inactivating protein.
- iii) It used to rejuvenate the whole body. It also used for rheumatoid arthritis, fever, edema, eye problems, stomach issues, and liver disorders.

5) Coriander:

Scientific Name: *Coriandrum sativum*

Characteristics: i) It is native to Southern Europe, Northern Africa, Southwestern Asia

- ii) It contains 92% water, 4% carb, 2% protein and 1% fat
- iii) It reduce blood sugar, antioxidants, lowered inflammation, maintain heart health etc.

6) Holy Basil:

Scientific Name: *Ocimum tenuiflorum*

Characteristics: i) It is native throughout the Indian subcontinent

- ii) It contains oleic acid, ursolic acid, rosmarinic acid, eugenol, carvacrol, linalool and β -caryophyllene etc.



ii) It helps in bronchitis, malaria, diarrhea, nausea, eczema, stomach ulcers, eye diseases, insect bites
E.t.c

7) Carom:

Scientific Name: Trachyspermum ammi

Characteristic: i) This is mainly cultivated in Iran and India.

ii) It contains Thymol, γ -terpinene, p -Cymene, β -pinene, myrcene, carvacrol

iii) It lower cholesterol, heart disease, ulcers, coughing, asthma, inflammation.

8) Ashwagandha:

Scientific Name: Withania somnifera

Characteristic: i) It is cultivated in many of drier regions of India.

ii) It contains withanolides.

iii) It increase energy levels, lower blood sugar levels, reduce cortisol levels, reduce stress and depression

9) Ginger:

Scientific Name: Zingiber officinale

Characteristic: i) It is mainly native in Asia

ii) It contains 79% water, 18% carb, 2% protein, 1% fat.

iii) It fight germs, calms nausea, soothes sore muscles, eases Arthritis, lower sugar and blood pressure level, relives Indigestion.



10) Natagrad:

Scientific Name: Cyperus rotundus

Characteristic: It is native to Africa, Southern and central Europe and Southern Asia

- i) It contains flavonoid, glycosides, saponins etc.
- ii) It is used to cure distaste, vomiting, diarrhea, dyspepsia.

11) Kalmegh:

Scientific Name: Andrographis paniculata

Characteristic: It is widely cultivated in Southern and South Eastern Asia

- i) It contains bicyclic diterpenoid lactone
- ii) It cures liver disease, Influenza, sinusitis, cold, tonsillitis

12) Sage leaf alangium

Scientific Name: Alangium salviifolium

Characteristics: It is native to India

- i) It contains thujone, monoterpenes, carnosol, rosmarinol, rosmarinic acid, flavonoids and tannins
- ii) It helps in headache, sore throat pain, stress, inflammation, memory loss and depression.

Conclusion:

Our ancestors used to depend on medical herbs from brushing to any disease which they are suffering from as they believed that medicinal herbs could cure anything. But as time passed by people started believing more in allopathic than ayurveda. So nowadays there is a less use of herbal medicines.

Bibliography:

- i) Ram Rastogi and B. N. Mehrotra, Indian Medicinal Plants vol. I to IV and VI
 - ii) en.m.wikipedia.org
 - iii) www.healthline.com
 - iv) www.verywellmind.com
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Aloe Vera.