

A PROJECT REPORT
ON
"MEDICINAL PLANTS OF PATTAMUNDAI COLLEGE CAMPUS"

Submitted By:
Department of Botany
2019-20



PATTAMUNDAI COLLEGE
PATTAMUNDAI
KENDRAPARA
754215

REPORT

A project was undertaken for the session 2019-20 by Department of Botany, Pattamundai College, Pattamundai on the topic "MEDICINAL PLANTS OF PATTAMUNDAI COLLEGE CAMPUS". Four students have participated in this project. They have visited to different area of Pattamundai college campus.

They have collected data of different medicinal plants and grouped them according to their habit i.e herb, shrub and tree.

.....

Abstract

The project paper presents the medicinal plants found in Pattamundai College campus. Large no. of medicinal plants were found from different parts of the study area. In this project we have discussed about 13 important medicinal plant. The climatic conditions of the area of study was suitable for the vegetation wealth due to alluvial soil. The study reports on 13 medicinal plants belonging to 9 families, along with their utility. Among plant families Fabaceae is dominant with 4 species. The campus is rich in greenery where environment and education combine to promote sustainable and eco-friendly practices in the campus. natural calamities i.e frequently occurring cyclones are big threat to these plant species.

Abstract

The project paper presents the medicinal plants found in Pattamundai College herbal garden. In this project we have discussed about 13 important medicinal plants. The climatic conditions of the area of study was suitable for the vegetation wealth due to alluvial soil. The study reports on 13 medicinal plants belonging to 9 families, along with their utility. Among plant families Fabaceae is dominant with 4 species. The campus is rich in greenery where environment and education combine to promote sustainable and eco-friendly practices in the campus. Natural calamities i.e frequently occurring cyclones are big threat to these plant species.

Introduction

Plant resources have remained an integral part of human society throughout history. After fulfilling the primary needs like food and shelter, man has sought for a suitable remedy among plants for curing various diseases.

Traditional medicine is defined as indigenous medicine that is used to maintain health and to prevent, diagnose, and treat physical and mental illnesses. Traditional medicine has been used for thousands of years with great contributions made by practitioners to human

health, particularly as primary health care providers at the community level and has maintained its popularity worldwide.

The study area is located near the Pattamundai town. Pattamundai is located at 20.57°N 86.57°E & 22 km from the Bay of Bengal in the Utkal Plains, at an elevation of 6 m from sea level. Pattamundai is a flat, low-lying delta region in the Lower Mahanadi River basin. The Brahmani river divides it from the Aul Block. The soil with high organic matter 5-15 % formed in temperate and cool humid region and low (1-3 %) in soil arid and semi-arid zones.

The plant-based, traditional medicine systems continues to play an essential role in health care, with about 80% of the world's inhabitants relying mainly on traditional medicines for their primary health care (Owolabi et al., 2007). India has several traditional medical systems, such as Ayurveda and Unani, which has survived through more than 3000 years, mainly using plant-based drugs. The materia medica of these systems contains a rich heritage of indigenous herbal practices that have helped to sustain the health of most rural people of India. The ancient texts like Rig Veda (4500-1600 BC) and Atharva Veda mention the use of several plants as medicine. The books on ayurvedic medicine such as Charaka Samhita and Susruta Samhita refer to the use of more than 700 herbs (Jain, 1968). According to the World Health Organization (WHO, 1977) "a medicinal plant" is any plant, which in one or more of its organ

contains substances that can be used for the therapeutic purposes or which, are precursors for the synthesis of useful drugs. The medicinal properties of plants could be based on the antioxidant, antimicrobial antipyretic effects of the phytochemicals in them (Cowman, 1999; Adesokan et al., 2008). According to World Health Organization, medicinal plants would be the best source to obtain a variety of drugs.

Materials and methods

Pattamundai block is situated in the Kendrapara District of Odisha state, India. It is located at a distance of about 20 kilometers from the district headquarter Kendrapara. Pattamundai College is located at a distance of about 2 k.m from Pattamundai market.

Such studies on timber yielding plants was conducted on herbal garden of Pattamundai college campus. Medicinal plants were identified with the help of recent and relevant regional floras and comparing these specimens with authentically identified specimens preserved in herbaria of Botany department, Pattamundai College. Their medicinal uses known by interviewing the natives and by consulting literature.

Result and discussion

Following is the list of 13 no. of medicinal plants. These are arranged according to their scientific names, families in parenthesis,

vernacular names in odia, herbarium and collector's initial, habitats of plants and uses.

Table 1- List of medicinal plants

No.	Local Name	Botanical Name
1	Ghrit kumari	<i>Aloe vera</i>
2	Patalagaruda	<i>Rauwolfia serpentina</i>
3	Durlabha	<i>Ocimum basilicum</i>
4	Thalkudi	<i>Centella asiatica</i>
5	Ashoka	<i>Saraca ashoca</i>
6	Satabari	<i>Asparagus adscendens</i>
7	Pippali	<i>Piper longum</i>
8	Chireita	<i>Andrographis paniculata</i>
9	Karanja	<i>Millettia pinnata</i>
10	Dayana	<i>Artemisia vulgaris</i>
11	Shephali	<i>Nyctanthes arbortristis</i>
12	Pasaruni	<i>Paederia foetida</i>
13	Bahada	<i>Terminalia bellerica</i>

1. ***Aloe vera***

Family-Asphodelaceae

Common Name-Ghritkumari

It is a shrubby, perennial, xerophytic, succulent, pea green color plant. Two substances from *Aloe vera* a clear gel and its yellow latex

are used to manufacture commercial products. Aloe gel typically is used to make topical medications for skin conditions, such as burns, wounds, frostbite, rashes, psoriasis, cold sores, or dry skin. Aloe latex is used individually or manufactured as a product with other ingredients to be ingested for relief of constipation.



2. *Rauwolfia serpentina*
Family-Apocynaceae
Common Name-Patalagaruda

Rauwolfia (*Rauwolfia serpentina*) is an evergreen shrub. It has been studied for the treatment of mental diseases, including schizophrenia and bipolar disorder, epilepsy and seizures, and of insomnia and sleep problems.



3. ***Ocimum basilicum***
Family-Lamiaceae
Common Name- Durlabha

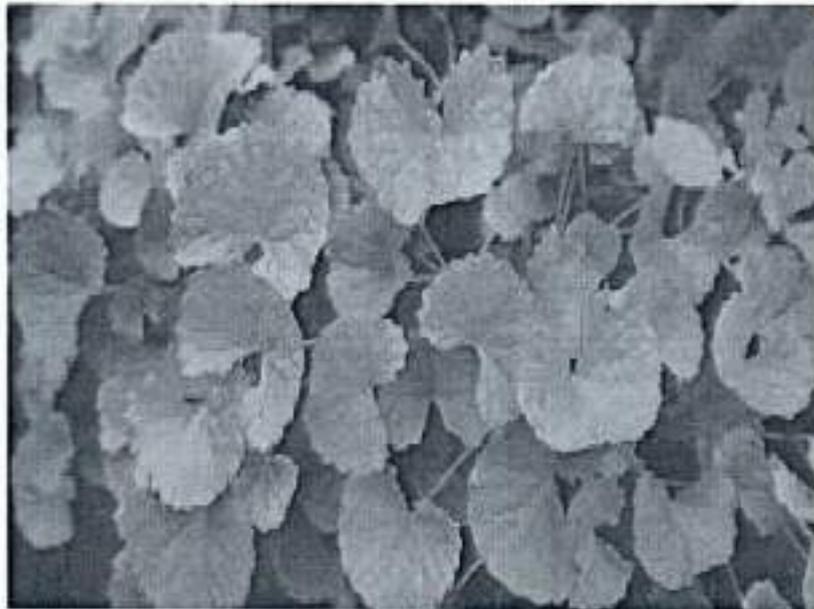
Thai basil is a perennial herb, that grows as a small, multi-branched shrub, reaching up to a foot in height. Thai basil can be used in sweet applications as well, added to fruit salads. Thai basil seeds are said to have antioxidant, anti cancer, anti viral, anti bacterial and anti fungal properties



4. ***Centella asiatica***
Family-Apiaceae
Common Name-Thalakudi

The plant is a small trailing herb and it is the only species of *Centella* found in India. Apart from wound healing, the herb is recommended for the treatment of various skin conditions such as leprosy, lupus, varicose ulcers, eczema, psoriasis, diarrhoea, fever,

amenorrhea, diseases of the female genitourinary tract and also for relieving anxiety and improving cognition.



5. Name-*Saraca asoca*
Family-Fabaceae
Common Name-Asoka

Asoka is a medium-sized, evergreen tree with beautiful fragrant flowers. Stem bark of Asoka tree is strongly astringent and a uterine sedative, uterine tonic, and styptic, having a stimulating effect on endometrial and ovarian tissue. The bark is also useful in dyspepsia, fever, and burning sensation. It is also used to treat menorrhagia, leucorrhoea, internal bleeding, hemorrhoids, and hemorrhagic dysentery.



6. *Asparagus adscendens*
Family-Asparagaceae
Common Name-Satabari

Asparagus adscendens is a sub erect or curved prickly shrub. Root is demulcent and used as tonic. It is also useful in diarrhoea, galactagogue, dysentery, and general debility. The tubers are rich in protein and specially credited with nutritive and aphrodisiac properties.



7. *Piper longum*

Family- Piperaceae

Common Name-Pipali

Long pepper is the fruit of *Piper longum* which is a slender, much branched, ascending herb and needs support for its proper growth. Plant root is used in Ayurveda as a carminative, tonic to the liver, stomachic, emmenagogue, abortifacient and aphrodisiac. Fruits contain haematinic, diuretic, digestive and general tonic properties, besides being useful in inflammation of the liver, pains in the joints, snakebite, scorpion sting and night blindness. The plant is also used in dyspepsia, abdominal pain and diuretic splenopathy, anorexia, asthma, fever and act as anti-haemorrhoidal and appetiser.



8. *Andrographis paniculata*

Family-Acanthaceae

Common Names: Green Chireita

It is an erect, annual herb and 30-90 cm tall with upper part of stem quadrangular while the lower part nearly rounded stem. The whole herb is bitter in taste. The plant is acrid, cooling, laxative, antipyretic, antiperiodic, anti-inflammatory, expectorant, sudorific, anthelmintic, digestive and stomachic. It is useful in burning sensation, chronic fever, malaria and intermittent fever, inflammation, cough, bronchitis, skin diseases, intestinal worm, dyspepsia, flatulence, colic, diarrhoea, dysentery, haemorrhoids and vitiated condition of pitta.



9. *Millettia pinnata*

Family-Fabaceae

Common Name-Karanja, Indian beech

Karanja (*Millettia pinnata*) is a fast-growing, multipurpose tree of the humid tropic. It is one of the few N-fixing trees that produce

oilseeds. Karanja is increasingly used for oil production due to its use in biodiesel. The oil was formerly used for lighting, as a raw material for soaps. Karanja wood can be used for fuel, and the resulting ashes as a dyeing agent. Roots yield pinnatin, a dyeing pigment. The bark is fibrous and can be turned into rope.



10. *Artemisia vulgaris*

Family-Asteraceae

Common Name-Dayana

Artemisia vulgaris is a tall herbaceous perennial plant growing 1–2 m (rarely 2.5 m) tall, with an extensive rhizome system. It is used in Jagannath temple, Puri and for cleansing the environment (sweeping floors or just hanging a bunch outside your home), as an incense when burnt and also as a medicinal plant.



11. *Nyctanthes arbortristis*
Family-Oleaceae
Common Name-Sephali

The name *Nyctanthes* means "Night Flowering" is a shrub or small tree growing to 10 m tall flaky grey bark. It is used in various ailments like fever, enlargement of the spleen, malaria, blood dysentery, cough and gastritis. Juices of leaves is used as digestives, antidote to reptiles venome. Seeds are used to cure scurfy infection of scalp, piles and skin diseases. Powdered stem bark is given in rheumatic joint pain, oil is used for pain in the eyes and with *Arjuna* bark it is rubbed on the body in internal injury. Flowers are bitter, astringent, carminative, stomachic and used in ophthalmic purposes. Barks are traditionally used as anti-dysentric and antidiarrhoeals.



12. *Paederia foetida*
Family-Rubiaceae
Common Name-Pasaruni

The *Paederia foetida* is useful in relieving a number of ailments like rheumatism, paralysis, abscesses, gout, diarrhea, dysentery and infertility. The powdered leaves are applied on the abdomen for relieving flatulence. The fruits of the plant are used to relieve tooth pain and for whitening blackened teeth.



13. *Terminalia bellirica*
Family- Combretaceae

Common Name-Bahada

Bahada is a tall handsome tree, with characteristic bark, 12-50 m tall. In traditional Indian Ayurvedic medicine, Bahada is known as "Bibhitaki;" in its fruit form it is used in the popular Indian herbal rasayana treatment triphala. This species is used by some tribes in the Indian subcontinent for its mind-altering qualities - they smoke dried kernels. Too much of this can cause nausea and vomiting.



References

1. Kohler RI, Juliane B. Anthropological veterinary medicine: The need for indigenizing the curriculum, Paper presented at the 9th AITVM Conference in Harrare. 14th-18th, 1998.

2. Jain SK, Srivastava K. Some folk herbal medicines for possible use in veterinary practices. *Indian Journal of Traditional Knowledge*, 2003; 2(2):18-125.
3. Mazars G. La médecine âyurvédique. In *Encyclopédie des médecines naturelles, phytothérapie - aromathérapie*. Editions techniques, Paris, A-4, 1-22.
4. Mukhopadhyaya GN. *History of Indian Medicine*. Vol. II. University of Calcutta. 1926, 356-495.
5. Filliozat J. *L'inde classique*, Ecole Française d'Extrême. Orient, Paris.1953; II:165-166.
6. Blondeau AM. *Matériaux pour l'étude de l'hippologie et de l'hippiatrie ibétaines*. Librairie bDroz, Geneva & Paris, 1972, 424.
7. Murthy KRS. *Sarangadharasamhita*. Chaukambha Orientalia, Varanasi, 1987.
8. Klayman DL. Qinghaosu (artemisinin): an antimalarial drug from China. *Science*, 1985; 228:1049-1055.
9. John RC, Joann, MK, Williamson RT, Jian L, Thomas JC, Victor LH et al. a new daphnane diterpenoid with potent antihyperglycemic activity from Maprounea. *African Journal of Natural Products*. 1999; 62:345-47.

Department of Botany , Pattamundai College
Students Attendance Sheet

Sl No	Roll No	Signature of the students
1	BS17-124	Rajib Girci
2	BS17-127	Prajna Parimita Dash
3	BS17-131	Bansarani Dash
4	BS17-139	Santoshkumar Perida
5	BS17-140	Ashis Kumar Rout
6	BS17-141	Ankita priyadarshini
7	BS17-143	Sargatika Nayak
8	BS17-147	Shweta Dash
9	BS17-156	Sarmistha Dash
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		