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## MACROPHYTES: LOSING ITS INDIGENOUS IMPORTANCE

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### ABSTRACT:

*Indigenous Medicinal Practices are an important component of the traditional knowledge. Apart from their commercial value, the local community utilizes a good number of these plants for various curative purposes, which are unknown to the people at large. Macrophytes are one of such Aquatic plants.*

*Attempt has been made to document some of the little known medicinal properties of Macrophytes used by the local community living around .*

### KEYWORDS:

*Indiginous, Medicinal use, Importance, Macrophytes, Curative.*

### INTRODUCTION : MACROPHYTES:-

Oceanic plants will be plants that have adjusted to living in amphibian conditions (salt water or freshwater). They are additionally alluded to as hydrophytes or macrophytes. A macrophyte is an amphibian plant that develops in or close to water and is either emanant, submergent, or skimming, and incorporates helophytes (a plant that develops in swamp, somewhat submerged in water, with the goal that it regrows from buds underneath the water surface). In lakes and waterways macrophytes give spread to fish and substrate for

oceanic spineless creatures, produce oxygen, and go about as nourishment for some fish and untamed life.

Oceanic plants require extraordinary adjustments for living submerged in water, or at the water's surface. The most widely recognized adjustment is aerenchyma, yet gliding leaves and finely dismembered leaves are likewise normal. Amphibian plants can just develop in water or in soil that is for all time immersed with water. They are in this manner a typical segment of wetlands.

Bordering stands of tall vegetation by water bowls and waterways may incorporate helophytes. Models incorporate stands of Equisetum fluviatile, Glyceria maxima, Hippuris vulgaris, Sagittaria, Carex, Schoenoplectus, Sparganium,

Acorus, yellow banner (Iris pseudacorus), Typha and Phragmites australis

Macrophytes require explicit substrate types to flourish, and their development gives an exceptional living space to different creatures. Macrophytes develop best in a blend of sand and filth, and are regularly found in territories with upwelling groundwater. Once macrophytes become built up inside the littoral zone they change the microclimate through the decrease of wave vitality and the production of warm slopes that keeps water from blending. These conditions advance molecule sedimentation. The level of microclimate change relies upon the qualities of thesediment structure, supplement accessibility, and dissemination of oxygen through

the residue. Macrophytes are indispensable to supplement cycling in the littoral zone as the two sources and sinks of supplements. Customarily, limnologists have considered macrophytes a supplement source, since they may join supplements from the anoxic dregs and afterward discharge them into the water section upon senescence. Others have discovered that supplements expelled from dregs or encompassing water section by plants are to a great extent held by plants until the plants rot

In addition to their role in nutrient cycling, macrophytes provide important habitat for organisms such as bacteria, periphyton, zooplankton, invertebrates, amphibians, fish, and waterfowl. Invertebrates and small fish use macrophytes as a habitat refuge from predation by invertebrates (e.g., dragonfly or damselfly nymphs), fish (e.g., Esox), and amphibians, and as a place to reproduce. For many invertebrates (e.g., insects, crustaceans) and vertebrates (e.g., water fowl, moose), macrophytes are a major food source.

### Classification of Macrophytes:-

Based on growth form, Macrophytes can be classified as:

- Emergent macrophytes
- Floating-leaved macrophytes
- Submerged macrophytes
- Free skimming macrophytes

### MACROPHYTES AS ENVIRONMENTAL INDICATORS -

Aquatic plant species assemblages are often determined by environmental variables at the local and landscape level. Macrophyte composition, abundance and growth are useful environmental indicators because they can be affected by a number of physical and chemical factors within stream habitats, including turbidity, nutrient concentrations and flow disturbance regimes. Macrophytes are not only affected by environmental conditions, but they themselves facilitate changes in water chemistry and physical habitats and can have a major role in aquatic ecosystem functioning, including:

- provision of habitat for aquatic organisms such as macroinvertebrates and fish
- reduction of erosion on stream banks
- effects on the nutrient cycle
- vertical mixing of water
- increase in dissolved oxygen levels
- reduction in water velocities, increase in water depth and channel width
- increase in sedimentation
- act as a food source.

### Common and Scientific Names of Commonly Occurring Emergent Aquatic Macrophytes

Scientific Name	Family	Common Name
Alisma Plantago	Alismataceae	Water plantain
Alternanthera Pphiloxeroides	Amaranthaceae	Alligator weed
Cabomba Aquatic	Nymphaeaceae	Aquarium plant
Colocasia Chamissonis	Araceae	Swamp taro
Colocasia Esculenta	Araceae	Aroids/ Taro
Cyperus Esculentus	Cyperaceae	Sedge
Eleocharis Dulcis (tuberosa)	Cyperaceae	Sedge/ Chinese water
Chestnut Eleocharis Ochrostachys	Cyperaceae	Sedge/ Chinese
Water Chestnut Eleocharis Plantagener	Cyperaceae	Sedge/ Chinese Water
Chestnut Euryale Ferox	Nymphaeaceae	Water lily

Hydroryza Aristata	Gramineae	Swimming grass
Jussiaea Repens	Onagraceae	Water primrose
Justicia Americana	Acanthaceae	Water willow
Leersia Hexandra	Gramineae	Rice cut-grass
Monochoria Gastata	Pontederiaceae	Monochoria
Nelumbo Nucifera (speciosa)	Nelumbonaceae	Lotus
Nuphar Luteum	Nymphaeae	Yellow water lily
Nymphaea Lotus	Nymphaeae	Water lily
Nymphaea Rubra	Nymphaeae	Red water lily
Nymphaea Stellata	Nymphaeae	Blue water lily
Panicum Repens	Gramineae	Torpedo grass
Polygonum Hydropiper	Polygonaceae	Smart weed
Sagittaria Sagittifolia	Alismataceae	Arrowhead
Sagittaria Trifolia (sinensis)	Alismataceae	Arrowhead
Scirpus Acutus	Cyperaceae	Hardstem bulrush
Scirpus Debilis	Cyperaceae	Weakstalk bulrush
Scirpus Mucronatus	Cyperaceae	Ricefield bulrush
Sium Sisarum	Apiaceae	Skirret
Sparganium Americanum	Sparganiaceae	Bur-reed

### Indigenous Medicinal usages of some Macrophytes:-

#### Medicinal use of Macrophytes in India:-

1. *Aerva lanata* Juss.; Vernacular name: Cherula Syn: *Achyranthes lanata* Linn.; (Amaranthaceae) Uses: Chopped leaves boiled with water are used for controlling diabetes and urinary disorders. Leaf juice reduces acidity.
2. *Bacopa monnieri* (L) Pennel.; Vernacular name: Brahmi Syn: *Lysimachia monnieri* Linn.; *Herpestris monnieri* (Linn.) Kunth; (Scrophulariaceae) Uses: Plant juice is considered effective in enhancing intelligence in children.
3. *Biophytum candolleianum* Wt.; Vernacular name: Mukkutti Syn: *Biophytum sensitivum* var. *candolleianum* (Wt.) Hook & Edgew.; (Oxalidaceae) Uses: Plant paste is used for skin diseases.
4. *Cardiospermum helicacabum* Linn.; Vernacular name: Uzhinja; (Sapindaceae) Uses: The entire plant is used for making a special preparation, locally called as Marunnu Kanji (medicinal soup), which is used for improving physical conditions and immunity.
5. *Centella asiatica* Urban.; Vernacular name: Kudavan / Kudangal Syn: *Hydrocotyle asiatica* Linn.; (Apiaceae) Uses: Plant paste is effective in treating paediatric diseases, throat disorders and piles.
6. *Cyclea peltata* (Lam.) Hook & Thompson; Vernacular name: Padakkizhangu Syn: *Menispermum peltatum* Lam. (Menispermaceae) Uses: Plant juice is diluted with water and used as shampoo. This solution is more effective in controlling dandruff.
7. *Cyperus rotundus* Linn.; Vernacular name: Muthanga; (Cyperaceae) Uses: Tuber is used for digestive disorders especially for children.
8. *Eclitpa prostrata* Linn.; Vernacular name: Kayyunni / Kayyonni Syn: *Eclitpa alba* (Linn.) Hassk.; (Asteraceae) Uses: Plant is squeezed and boiled with coconut oil and is applied on the scalp is a good medicine for preventing hair loss and dandruff.
9. *Emelia sonchifolia* DC.; Vernacular name: Muyalchevi; (Asteraceae) Uses: Plant juice is filtered and applied into eyes for curing injuries. Semi-boiled juice is given to treat asthma. Plant paste is applied for reducing inflammation.
10. *Hygrophylla schulli* (Ham.) M.R. & S.M. Almeida; Vernacular name: Vayalchulli Syn: *Bahel schulli* Ham.; *Hygrophila auriculata* (Schum.) Heine; *Asteracantha longifolia* (Linn.) Nees; *Hygrophila spinosa* T. Anderson; (Acanthaceae) Uses: Application of the leaf paste reduces inflammation and muscular pain.

11. *Nelumbo nucifera* Willd.; Vernacular name: Thaamara; (Nymphaeaceae) Uses: Leaf ash together with coconut oil is used for curing foot cracks.

12. *Oxalis corniculata* Linn.; Vernacular name: Puliyarila; (Oxalidaceae) Uses: Fresh plant juice is used for piles and for several paediatric diseases. Fresh plant paste is used for curing indigestion. Plant with other ingredients is used for preventing jaundice.

13. *Pandanus tectorius* Soland.; Vernacular name: Pookaitha; (Pandanaceae) Uses: Burnt flower ash is used for healing wounds. Roots together with other medicines are used to control jaundice.

14. *Phyllanthus amarus* Schum. & Thonn.; Vernacular name: Kizharnelli; (Euphorbiaceae) Uses: Plant paste or chopped leaves boiled with water is given to control and prevent jaundice.

15. *Scoparia dulcis* Linn.; Vernacular name: Kallurukki; (Scrophulariaceae) Uses: Plant paste together with fresh cow milk is given for relieving urinary disorders. It is believed that this medicine can eliminate kidney stones when the preparation is used regularly, once in a day, for 21 days.

### RECOMMENDATIONS:-

1. TRADE:- There is need to set up a Herbal mandi at Raipur that will provide documented, graded raw drugs to any buyers- traders or companies. A producer company owned by FDA from low risk, high potential areas can be promoted to operate the herbal mandi/ sales
2. POLICY- Medicinal plants wing should be developed as a profit centre

### CONCLUSION-

The revival of public interest in plant-based medicine together with the rapid expansion of pharmaceutical industries has necessitated an increased demand for medicinal plants leading to the over exploitation of many species. The steady increase in population, and the awareness of the side effects of several synthetic drugs have encouraged the usages of traditional medicines in developing countries. Hence, there is need to promote the usage of traditional medicine.

In many traditional societies, women are the primary herb gatherers and herbalists. Societal changes in work pattern and family structure have several impacts on the traditional health sector. The services rendered by traditional medicine in providing everyday health care to the majority of the population in several countries have been ignored by the modern society. Local extinction of medicinal plants very often leads to the loss of traditional knowledge of the medicinal properties, since such traditions are transmitted orally. Once such knowledge systems are gone to the oblivion it would be an irrecoverable loss to the society. Hence, the conservation of these plants at the local level seems to be the need of the hour.

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