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Folklore use of Common Hydrophytes Found in and around 'The *Jagannath* Temple', Puri, Odisha

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ABSTRACT

Background: Wetlands are rich in aquatic resource which maintains biodiversity and offers support to various aquatic lives. This atmosphere is generally supports hydrophytic plants or hydrophytes.[1] In India wetlands occupy 59.2 million hectres.[2] Puri is a coastal district of Eastern Odisha famous for "The *Jagannath* Temple" and associated ponds, wells and host of other ancient monuments along with long sea beaches and many rivers. Much survey has been done previously for hydrophytes in India and other districts of Odisha, but not much for Puri district. This work is important as many folklore practicing peoples are using various aquatic herbs for treatment purpose. **Methodology:** The study was conducted during 2022-2023, involving field visit, meeting with folklore practicing people and taking the photographs of plants for identification. The plants were identified based on The Flora of Odisha[3] and Botany of Bihar & Odisha[4] and contemporary monographs and reviews.[5,6] **Results & Discussion:** A total number of 36 species belonging to 22 families were documented and their supposed folklore medicinal uses have been recorded.

Key words: *Hydrophytes, Folklore practitioners*

INTRODUCTION

The 2/3rd surface of earth is covered with water. For further survival and expansion of human habitat, water plays an important role. The plants found in water or near water bodies are called hydrophytes and in India approximately 59.2 million hectares of land is said to be in wetland category[3(1)] which means terrestrial areas with shallow water.

Puri occupies an important place in heart of Odisha and India due to Presence of Jagannath Temple and ever beautiful seashore over the Bay of Bengal. It's a fact that Lord Jagannath, is administered with A *Ayurvedic* poly herbal medicine in special days as per his century old established holy rituals. In this aspect Puri holds a special place for Ayurveda and plant loving people.

Various well documented studies were done in the past to assess the constitution of hydrophytes in India and Odisha. Many Surveys were carried out for documentation of hydrophytes of Eastern Ghats regions of Odisha. It will be a new kind of study to assess the type of common hydrophytes in Puri, Odisha w.s.r to its proposed folklore uses.

METHODOLOGY

This survey was undertaken during 2020-2021 which comprises field visit, taking picture of sample plants, identification and meeting folklore practitioners for its purported use. Plant specimen field were visited multiple times to see its flowering and fruiting which weeds out identification issues if any. The plants were identified based on "The Botany of Bihar and Odisha",

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"The Flora of Odisha" and other contemporary monographs available. To make the survey easy and logical and the total area is divided into various zones and field tour was planned accordingly. Plants were categorized as Pharmacopeial (P) and Extrapharmacopeial (EP)

RESULTS

A total number of 36 species belonging to genera and 22 families were recorded… plants were used for external burn,…plants species were used for food, 02 plants were used for scalp diseases and 02 plants were used in veterinary medicinal purpose. Species were used as leafy vegetable (*Saag*) by local peoples.

Table 1

SN	Botanical Name	Part used	Family	Local Name	Folklore Use
1.	*Azolla pinnata R.Br.*	Whole plant	Salviniaceae[1]	Chuni dala	Antidandruff[1]
2.	*Trapa natans L.var bispinosa*	Fruit	Trapaceae[2]	Pani singada	Male virility[2]
3.	*Alteranenthera philoxeroides.(Mart)*	Leaves	Amaranthaceae[3]	Machakhi	Food[3]
4.	*Alteranenthera sessile(L.)R.Br.ex DC*	Leaves	Amaranthaceae[3]	Madaranga	Food[3]
5.	*Centella asciatica (L).Urban*	Leaves	Umbellifera[4]	Thalukudi	Brain Tonic[4]
6.	*Aponogeton natans(L.) Engl & Krause*	Whole plant	Aponogetonaceae[5]	Ghanchu	Burn[5]
7.	*Colocasia esculenta(L.) Schott.*	Leaves	Araceae[6]	Panisaru	Haemmoroids[6]
8.	*Pistia stratiotes L.*	Whole plant	Araceae[6]	Bora Jhangi	Burn[5]
9.	*Eclipta prostrate(L.)*	Leaf &Stem	Asteraceae[7]	Keasraja	Hair colouring[7]
10.	*Emilia sonchifolia(L.) DC.*	Whole plant	Asteraceae[7]	Sarkara	Fever[8]
11	*Enydra fluctuans Lour.*	Leaves	Asteraceae[7]	Hidimichika	Constipation[9]
12	*Synedrella nodiflora(L.) Gaertn*	Whole plant	Asteraceae[7]	Hemapuspi	Otalgia[10]
13	*Azolla microphylla Kaulf.*	Whole plant	Salviniaceaea[7]	Kuni dala	Antidandruff[1]
14	*Ceratophyllum demersum L.*	Whole plant	Ceratophyllaceae[8]	Shivara	Burn[5]
15	*Commelina benghalensis L.*	Leaves	Commelinaceae[9]	Kanisiri	Food[3]
16	*Commelina erecta L.*	Leaves	Commelinaceae[9]	Kanisirini	Food[3]
17	*Ipomea aquatica.*	Leaf and stem	Convolvulaceae[10]	Kalama	Food[3]
18	*Ipomea carnea jacq.*	Leaf	Convolvulaceae[10]	Amari	Constipation[9]
19	*Scripus articulates L.*	Root	Cyperaceae[11]	Kanri	Genito-Urinary[11]
20	*Aeschynomene aspera L.*	Whole plant	Fabaceae[12]	Sola	Veternary use[12]
21	*Hydrilla verticillata (L.f.)Royle.*	Whole plant	Hydrocharitaceae[13]	Chingudidala	Diabetes[13]
22	*Ottelia alismoides (L.)Pers.*	Whole plant	Hydrocharitaceae[13]	Pani-Kunduri	Burn[5]

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23	*Hydrolea zeylanica(L.) Vahl.*	Whole plant	Hydroleaceae[14]	Nayanatara	Food[3]
24	*Vallisneria natans(Lour.)Hara*	Whole plant	Hydrocharitaceae[13]	Siala	Gynaecological[14]
25	*Marsilia minuta L.*	Leaf	Marsileaceae[15]	Sunusunia	Anaemia[15]
26	*Eurale ferox Salisb.*	Leaf and flower	Nymphaceae[16]	Kanta Padm	Burn[5]
27	*Nymphaea nauchali Burm.f.*	Leaf and flower	Nymphaceae[16]	Neela Kain	Burn[5]
28	*Nymphea pubescens Willd.*	Stem and flower	Nymphaceae[16]	Dhala kain	Burn[5]
29	*Ludwigia octovalvis(Jacq) Raven.*	Stem and flower	Onagraceae[17]	Jal-lavanga	GI disorders[16]
30	*Eragrostis uniloides(Retz.) Nees ex S*	Flower	Poaceae[18]	Phur-phuri	UTI[17]
31	*Oryza rufipogon Griff.*	Whole plant	Poaceaea[18]	Balunga	Diabetes[13]
32	*Polygonum barbatum L.*	Whole plant	Polygonaceae[19]	Pani Saga	Food[3]
33	*Eichhornia crassipes (Mart)*	Whole plant	Pontederiaceae[20]	Bilati dala	Veterinary use[12]
34	*Phyla nodiflora(L.)*	Whole plant	Verbenaceae[21]	Jala Pippali.	Wound healing[18]
35	*Glinus oppositifolius(L.)Aug.DC*	Whole plant	Molluginaceae[22]	Pita saga	Hepato-billiary[19]
36	*Cyprus rotundus*	Root.	Cyperaceae[11]	Mutha	Loose stool[20]

Discussion

Total 36 species of hydrophytes from 22 families were found in and around "The *Jagannath* Temple" with maximum from Asteraceae - followed by Hydrocharitaceae, Poaceae, Nymphaceaea, Cyperaceae, Convulvulaceae, Salviniaceae, Polygonaceae, Molluginaceae, Verbenaceae, Pontederiaceae, Onagraceae, Marsileaceae, Ceratophyllaceae, Hydroliaceae, Aponogetonaceae, Umbelliferae, Salviniaceae, Trapaceae, Amaranthaceae, Commilinaceae, and Araceae. With reference to folklore use it is found that 20 health aliments were covered with maximum used as food and in external burn cases as Paste applied over the wound by the folklore practitioners, few were used in veterinary disease and rest are mentioned for different aliments.89% hydrophytes are extrapharmacopeial (*Anukta Dravya*) with no classical reference.

Conclusion

This study revealed the wide range of hydrophytes with economic and medicinal importance found as weed in and around the *Jagnnath* Temple. Historically precious gems, metals and medicines are stored in temples and "The Jagannath Temple", in Puri (Odisha) is no exception to this. A systematic applied research should be made in near future to utilize the vast aquatic plant resource found in Odisha specifically for medicinal use.

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