

Qualitative Study of Aquatic Weeds of Aamtara Lake in Dewada Village of Chandrapur District

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ABSTRACT

In present study, survey was carried out to find out the diversity of aquatic weeds in Aamtara lake in Dewada village of Pombhurna Tehsil of Chandrapur district in Maharashtra state in the year 2021 using qualitative study of weeds. During weed study in all total 19 species of aquatic weeds belonging to 14 different families were recorded in Dewada village Aamtara lake ecosystem. Based on habitat the weeds are classified into 4 different types into free floating, submerged floating, emergent and marginal types. In present study we recorded rich biodiversity of aquatic and terrestrial weeds represented by Ipomoea, Vallisneria, Hydrilla and Nymphaea species in lake basin on which rich biodiversity of birds thrive in winter season.

Keywords : Qualitative study, Aquatic weeds, biodiversity, Aamtara lake, Chandrapur district.

Introduction

The aquatic weeds were present in wetland ecosystems of the world and are classified based on their habitat which form their eco-environment and become conducive for their growth and reproduction. Water bodies which are places of recreational and aesthetic use are badly affected by unwanted growth of aquatic weeds. It also affect the quality of water in which the weeds thrive. Aquatic weeds impede the free flow of water which may contribute to increased seepage and may cause rises in water-tables in the adjoining areas. Fish production is greatly hampered by the presence of floating and submerged aquatic weeds. Several researcher work on weeds from different states and different parts of the world viz. Lars, (2003), Sanyal, (2007), Uka., (2009), Ahamad, (2015), Chaturvedi, (2016), Sharma and Dwivedi (2016), Fekadu, (2017), Wahane, *et.al.*(2017), Prasad, (2018). Pimpalshende, (2019), Hacer, *et.al.*(2021). Aquatic weeds choke the water bodies and pose a danger of mosquito breeding sites worldwide. As no weed study was recorded from Aamtara lake of Pombhurna lake the present research was undertaken to analyze it.

Materials And Methods

Aamtara lake is a freshwater lake located in Dewada village in pombhurna tehsil of Chandrapur district. The lake is located between 19°54' 22" north latitude and 79° 36' 15" east longitude. Total water spread area of this freshwater lake is 36364.18 m² and it is 194 mts. above the Mean Sea Level.

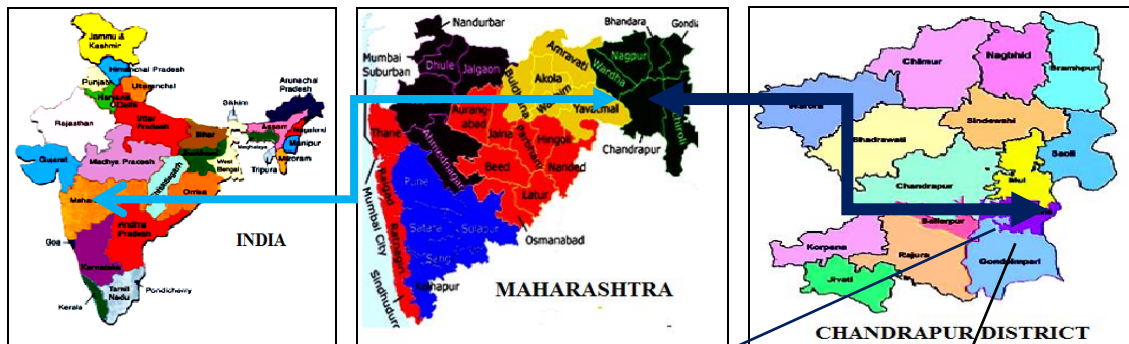


Fig. 1 : Satellite view of Aamtara lake



Fig. 2: View of lake Aamtara

Aquatic weeds in shallow water were collected directly by hand picking while those from deeper water were collected with the help of long handled hook and wherever possible services of local fishermen community were used for collecting the weeds. On collection the weeds were thoroughly washed, excess water soaked with filter paper, kept in polythene bags lined with filter paper and brought to the laboratory of N.S.College Bhadrawati Dist.Chandrapur and identified using Standard literature (Cook 1996, Lancer 2002, Sharma 2013).

Result And Discussion

The observed macrophytes in Aamtara lake of village Dewada in Pombhurna tehsil of chandrapur distirct were divided into different types viz. Floating submerged (06), Rooted submerged (04), Rooted emergent (04), Rooted floating(02), Marginal weeds (03).



During study period in the year 2021 we recorded following species of weeds in the lake and its bank areas viz., *Nymphoidis cristata*, *Nelumbo lutea*, *Marsilea quadrafolia*, *Nymphaea spp.*, *Vallisneria spiralis*, *Ceratophyllum spp.*, *Potamogeton crispus*, *Potamogeton nodosus*, *Hydrilla verticillata*, *Alternanthera philoxeroides*, *Typha angustata*, *Sagittaria spp.*, *Polygonum spp.*, *Ipomoea aquatica*, *Cynodon dactylon*, *Eleocharis dulcis*, *Ipomoea indica* and *Ottelia alismoides*. The different macrophyte species attract diversity of birds to the lake basin on which they thrive in winter season.

Similar finding were observed by Reddy and Chaturvedi (2016) who observed 56 speceies of macrophytes in major river in chandrapur district. Prasad,N and Das, T.(2018) observed 58 speceies belonging to 30 families in Barak valley in Assam. Pimpalshende and Sitre (2019) recorded 13 macrophyte species in Satara Bhosale lake and 15 macrophyte species in Satara Tukum lake in pombhurna tehsil in chandrapur district. Chunne and Nasare(2018) recorded 22 speceis of mcrophytes out of 9 species of macrophytes in Nandgaon lake and 13 speceis of macrophyte in Arwat lake in chandrapur district. Sharma and Dwivedi (2016) observed aquatic macrophyte in Govardhan sagar water body at Ujjain and many more finding.

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Table: List of Weeds in Aamtara lake of Dewada village during 2021

Sr.No.	Type of Weed	Name of Weed	Family
1	Floating submerged	<i>Nymphoidis cristata</i>	Nymphaceae
2	Floating submerged	<i>Nelumbo lutea</i>	Nymphaceae
3	Floating submerged	<i>Marsilea quadrafolia</i>	Marsileaceae
4	Floating submerged	<i>Nymphaea sp.</i>	Nymphaceae
5	Floating submerged	<i>Vallisneria spiralis</i>	Najadaceae
6	Floating submerged	<i>Ceratophyllum spp.</i>	<i>Ceratophyllaceae</i>
7	Rooted submerged	<i>Potamogeton crispus</i>	Potamogetonaceae
8	Rooted submerged	<i>Potamogeton nodosus</i>	Potamogetonaceae
9	Rooted submerged	<i>Hydrilla verticillata</i>	Hydrocharitaceae
10	Rooted submerged	<i>Ottelia alismoides</i>	Hydrocharitaceae
11	Rooted emergent	<i>Alternanthera philoxeroides</i>	Amarantheceae
12	Rooted emergent	<i>Typha angustata</i>	<i>Typhaceae</i>
13	Rooted emergent	<i>Sagittaria sp.</i>	Alismataceae
14	Rooted emergent	<i>Isoetes melanospora</i>	Icoetaceae
15	Rooted floating	<i>Polygnum spp.</i>	<i>Polygoneaceae</i>
16	Rooted floating	<i>Ipomoea aquatica</i>	Convolvulaceae
17	Marginal Weeds	<i>Cynodon dactylon</i>	<i>Poaceae</i>
18	Marginal weeds	<i>Eleocharis dulcis</i>	<i>Cyperaceae</i>
19	Marginal weeds	<i>Ipomoea indica</i>	Convolvulaceae



Ipomea indica



Hydrilla verticillata



Potamogeton crispus



Vallisneria



Ottelia alismoides



Potamogeton



Potamogeton spp.



Eleocharis spp.



Hydrilla



Typha



Isoetes melanospora



Nymphaoides